World Fishing Fleets

An Analysis of Distant-water Fleet Operations

Past - Present - Future

Volume VI

Western Europe and Canada

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World Fishing Fleets:

An Analysis of Distant-water Fleet Operations
Past - Present - Future

Volume VI

Western Europe and Canada

Prepared by
The Office of International Affairs

William B. Folsom
David J. Rovinsky
Dennis M. Weidner

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National Marine Fisheries Service
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Honolulu, Hawaii

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STATISTICAL NOTE

The principal source of statistical data for this study was *Lloyd's Register of Shipping* which provided uninterrupted statistical data from 1975 through June 1992. The *Lloyd's Register of Shipping* includes worldwide data for vessels having over 500-gross registered tons (i.e., high-seas fishing vessels) that can be used for tracking overall trends and making comparisons among countries. There were two problems the authors faced when using *Lloyd's Register*: (1) many high-seas vessels are in the 100-499-GRT range, and (2) *Lloyd's Register* included Greenland's fleet statistics under Denmark and began including the Faroe Island's fishing fleet statistics under Denmark beginning in 1987. This caused considerable confusion about the size of these three countries' fishing fleets. Information was also obtained from a variety of other sources:

1) FAO: The authors obtained some fleet data from the Food and Agriculture Organization (FAO), *Fishery Fleet Statistics: Bulletin of Fishery Statistics*. The FAO statistics also cover the entire world fishing fleet, including small coastal vessels, but frequently have substantial periods for which no data were available, especially during the early 1970s, late 1980s, and early 1990s. The FAO statistics were, thus, less useful than the *Lloyd's Register of Shipping* statistics and were used primarily for general background.

2) OECD: The Organization for Economic Co-Operation and Development (OECD), *Review of Fisheries in OECD Member Countries* was another important source, especially for some of the earlier years.

3) Country statistics: The authors also used some individual country studies when data were available for long enough periods to reveal meaningful trends. These country studies included the *Annual Report on German Fisheries* (FRG), *Fishery Fleet Statistics* (Norway), *L'évolution du secteur belge de la pêche maritime* (Belgium), and *Sea Fisheries Statistical Tables* (UK).

Statistics prepared by international organizations and governments range from excellent to poor and, in some instances, non-existent. Different reporting methods and reporting periods can produce minor variations between various sources that complicate meaningful comparisons. Some countries collect data on powered vessels only; some include non-powered fishing vessels in their statistics. Other nations report only vessels over a certain tonnage while still others include only "decked" vessels (i.e., those with a deck as opposed to open rowboats without a deck). Countries also change their reporting methods or periodically refine their data in later years. ***The authors recognize that different numbers have been, or can be, cited for the same country's fleet for the same year.*** This report attempts to overcome the problem by using a single source (Lloyd's Register of Shipping) and supplementing the information with other reliable sources as available.

EMPHASIS ON HIGH-SEAS FLEET

The authors have decided for the purposes of this study to define high-seas fishing vessels as vessels of 500-GRT or more. The authors decided to use this definition for analytical simplicity. Existing data sets, such as those provided by *Lloyd's*, give worldwide fleet statistics based on the size, but not the deployment of vessels. The authors have had to rely on such data sets because compiling comprehensive world-wide statistics from national statistical reports was beyond the resources available for this study. The authors recognize, however, that small coastal vessels can be shifted from one country to another. Many countries deploy vessels smaller than 500-GRT on the high-seas. The authors, for example, were faced with the problem of not using statistics which identified high-seas vessels in the 100- to 499-GRT range, because these vessels were below the 500-GRT cutoff point. Alternatively, some countries deploy vessels larger than 500-GRT in coastal fisheries. The authors believe that focusing on vessels of 500-GRT or more, from one respected source, provided an excellent picture of basic **trends**.

In our study we have used the term "high-seas" to identify vessels over 500-GRT that fish beyond 200-miles Exclusive Economic Zones. As indicated above, there are many vessels in the 100-GRT to 499-GRT that can also fish on the high-seas or that fish thousands of miles from their home ports. In many cases we used the term "distant-water" to identify fishing grounds far from home ports of various countries. Readers are cautioned that there are a few instances where the terms overlap: vessels under 500-GRT fishing far beyond 200-miles and vessels over 2,000-GRT fishing close to shore. The authors have attempted to identify "high-seas" versus "distant-water" fisheries as much as possible, but there were a few cases where the authors simply did not have sufficient information about certain vessels or fisheries.

A WORD ABOUT REFLAGGING

Reflagging, registering a vessel in another country, is a growing concern for fishery managers around the world. Reflagging is done for many reasons. The simplest case is a vessel owner in one country selling a vessel to a new owner in a different country. In other cases, local requirements may require all joint venture fisheries' vessels to fly the flag of one particular country. In some instances, and particularly for older and less efficient vessels, fishermen may not be able to operate profitably in one country and may reflag their vessel in another where taxes, fuel costs, and crew salaries are less onerous. While there are several major reasons for reflagging a vessel, one reason of growing concern is reflagging to avoid internationally agreed measures for the conservation and management of living marine resources. By reflagging a vessel with a country that is not a signatory to an agreement designed to manage and/or conserve living marine resources, a vessel may avoid the regulations/conservation measures for a regional area. The problem is compounded by the fact that many of the countries frequently used for reflagging simply do not have the staff to monitor the fishing operations of their flagged vessels throughout the world. The issue of reflagging is gaining international attention and is the subject of the proposed Agreement to Promote Compliance with International Conservation and Management Measures for Fishing Vessels on the High Seas approved by the Food and Agriculture Organization of the United Nations in November 1993 for ratification by interested States.

SPECIAL NOTICE: In the preparation of this report, the authors noted that in many instances reflagging simply involved the transfer of ownership from one owner to another. The reasons for other reflaggings were less clear. However, the purpose of this project was to identify ***trends*** and the results obtained through our research efforts show that reflagging has increased sharply in the last few years.

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Prepared by:

Division of International Science, Development and Foreign Fisheries Analysis
The Office of International Affairs, F/IA2
National Marine Fisheries Service, NOAA
U.S. Department of Commerce
1335 East-West Highway
Silver Spring, MD 20910-3225

TEL: 301-713-2286
FAX: 301-713-2313

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OVERVIEW

West European fishing fleets harvest approximately 12-percent of the world's fish and shellfish. This harvest is usually sold fresh or is processed into high-value seafood items generating billions of dollars in world markets. European fishermen operate a range of fishing vessels, from small coastal vessels to super-factory ships. Unlike fishermen from some Asian countries, the West Europeans tend to fish close to home -- in the North Atlantic and Mediterranean. The European Community (EC), however, has worked assiduously to negotiate a network of fishery agreements on behalf of its member states and over 800 EC-flag fishing vessels currently fish from various ports along the coast of Africa and into the Indian Ocean. The EC is now attempting to open access to Latin American waters for their fishing vessels because several important stocks of North Atlantic fish, such as Atlantic cod, have collapsed in recent years. This has placed a tremendous financial burden on the fishing industries of many EC countries dependent upon fishing in the North Atlantic region. In 1993, 100+ West European vessels were reflagged to foreign registry. This number could double if EC negotiators are unable to negotiate access to Namibia in 1994 or if the Argentines fail to ratify an agreement allowing EC vessels to fish in their waters in 1994.

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I. OVERVIEW

There are several important points about West European and Canadian fisheries that will assist the reader in comprehending the status of these diverse fisheries and fleets in 1993:

- 800+ West European vessels fish in the North Atlantic and Mediterranean or in coastal waters of other countries under bi-lateral fishery agreements negotiated by the European Community (EC).

- 100+ reflagged vessels (from Western Europe) are believed to be fishing in the Atlantic or Pacific Ocean in 1993.

- 7 to 8 West European-flag vessels are believed to be fishing on the high-seas in the South Atlantic or Pacific Ocean in 1993.[1]

- 300+ West European high-seas fishing vessels will be redeployed, sold, scrapped, or otherwise decommissioned between 1993 and 1995.[2]

- 270+ of these vessels belong to the EC fishing fleet and 30+ of these vessels belong to the non-EC countries.[3]

- The EC vessels must be deployed off Argentina or Namibia in the near future to avoid bankruptcies.

- If EC negotiators are unable to conclude agreements with Argentina[4] and Namibia, then over 200 additional EC vessels could be converted to non-fishery use, sold, or scrapped.

- Non-EC countries have one-third the number of high-seas vessels and a only few of these vessels (possibly 30) could be sold to fishermen in other countries.

- Canada's East Coast fisheries are facing tremendous pressure in the face of complete moratoriums on fishing and this may tempt some Canadian fishermen to consider selling or reflagging their vessels in the future.

- Reflagging became significant in 1993, as 100+ West European fishermen reflagged their vessels in Belize, the Cayman Islands, Cyprus, the Dominican Republic, Honduras, Malta, Panama, or St. Vincent.

CURRENT HIGH-SEAS FISHING

Despite a fleet of nearly 800 high-seas fishing vessels, only 7-8 West European-flag vessels are believed to be currently fishing on the high-seas in the Atlantic and Pacific in 1993. The vessels that currently fish the high-seas include: the German-flag *Jan Maria*, the *Dirk Dirk*, and the *Gerda Maria*[5] and the Dutch-flag *Dirk Diederick*, *Franziska, Cornelis Vrolijk Fzn*, and *Zeeland*.[6] These vessels are built to roam the oceans of the world, catching or "kondiking" (buying), processing, and freezing up to 250 tons of herring, mackerel, or horse mackerel a day. One tuna purse seiner, the *Isabel Tuna*, flying the Cypriot flag, is currently fishing in the Eastern Tropical Pacific. A Spanish tuna purse seiner, the *Monteclaro*, reportedly sank in this same area on July 14, 1993.[7] The non-EC countries also fish close to home, in the North Atlantic or Mediterranean and a few non-EC fishing firms operate a small number of joint venture operations in distant-water fisheries.

FUTURE FLEET DEPLOYMENT

EC countries will deploy or decommission approximately 270 high-seas fishing vessels. Spain, Portugal, and the United Kingdom will mainly redeploy their vessels in the next 2 years, but some vessels may be decommissioned. Greece, France, Germany, and Denmark, will mostly decommission their vessels. Some vessels may be involved in joint venture arrangements allowing the transfer of ownership in return for access to the resource for a limited period of time. Most of the Spanish and Portuguese vessels will be deployed off Namibia and Argentina as foreign-flag vessels fishing with coastal state licenses or as part of a joint venture arrangement with companies in the coastal country.

- Argentina - The EC initialed an agreement with Argentina during December 1992. The agreement was a major policy change for the Argentines who had previously imposed restrictive conditions for access.[8] The agreement will permit 70 EC vessels to fish off Argentina under a variety of joint venture arrangements. Most of these vessels will be Spanish. The agreement has not yet been ratified by Argentina.[9]

- Namibia - The EC has not yet been able to negotiate an access agreement with Namibia, although it remains a high priority. Namibia has, to date, rejected all EC offers to negotiate a fisheries agreement. Namibia ended all foreign fishing in its 200-mile Exclusive Economic Zone (EEZ) when it became independent in 1991. This affected 200 Spanish and 10 Portuguese vessels. Namibian officials now report that the country's hake stocks are recovering and that they hope to market this popular fish in EC markets.[10] They will require EC concurrence to do so. It is likely that bilateral fishery negotiations between the EC and Namibia will resume in 1993 or 1994.[11] It is unknown if all 210 EC vessels, which fished there before 1991, will be able to return to Namibian waters. Those that cannot will likely be sold, transferred to other non-fishing operations, or scrapped.

- Indian Ocean - The EC has negotiated a series of agreements which provide access for EC tuna seiners to Indian Ocean resources. This fleet may expand especially if Italian vessels join this fleet.

● Pacific - There is a possibility that some Spanish or French world-class tuna purse seiners might be fishing in the Western Pacific Ocean. One Spanish tuna vessel, the *Monteclaro*, sank in the Eastern tropical Pacific on July 14, 1993.[12] There are 6 ex-Spanish tuna vessels currently reflagged in Panama which may be fishing for tuna in the Pacific, along with 1 vessel reflagged in Malta and 1 reflagged in Cyprus.

The non-EC countries are unlikely to redeploy large numbers of their vessels in distant-water fisheries. These countries have never operated extensively beyond the North Sea or North Atlantic and are unlikely to initiate such high-cost operations requiring lengthy trips at this time. However, individual companies may seek to fish under joint venture arrangements in distant waters, such as off New Zealand, South Africa, Peru, or possibly even off Russia. The shift to distant waters will depend upon the recovery of cod stocks in the North Atlantic.

DECOMMISSIONING EFFORTS

The EC is the only West European body with a major, long-term program aimed at reducing the size of its fleet. The EC's Multi-Annual Guidance Program (MAGP) is a 10-year effort designed to reduce the size of the EC fleet by 1996. This program, however, is primarily aimed at reducing the size of *coastal* fishing vessels, although high-seas vessels will be included. The MAGP calls for vessels to be permanently withdrawn from EC rolls, through transfer to non-fishing status, sale to third countries, or scrapping. *The number of EC vessels that will be decommissioned ultimately depends upon the success of EC negotiators in gaining access to Namibian waters and to the success of the Argentine agreement when it is approved.*

The authors believe that approximately *30 non-EC high-seas vessels could be sold between 1993 and 1995.*[13] Icelandic fishermen are likely to sell some used vessels to reduce operating costs of companies adversely affected by the current (1991-93) decline in cod stocks, which are not expected to recover until 1996-98. Norwegian fishermen may also sell some vessels during 1993-94. Faroese fishing vessels, in particular, are for sale at attractive prices. The vessels were built with generous state subsidies and are now being sold for a fraction of their original cost. Some of Greenland's fleet of shrimp trawlers and cod factoryships could be sold, though in all probability to other Nordic countries.

REFLAGGING

Reflagging is becoming significant as declining catches, increasingly severe management measures, and adverse economic conditions force some fishermen to seek alternatives to existing regimes. Danish fishermen reflagged a few vessels in Panama in an attempt to fish wild Atlantic salmon in 1989-91. A Spanish and a Belgian firm currently employs Taiwanese longliners out of Honduras. Cyprus and Malta have become important centers for reflagging in 1993.[14] Belize, the Dominican Republic, Panama, and St. Vincent are all attracting West European vessels to their registries. Norway recently encountered several Caribbean-flag countries fishing between the Russian and Norwegian 200-mile limits in the Barents Sea.[15]

II. INTRODUCTION

A. HIGHLIGHTS

West European countries deploy some of the world's most modern and efficient fishing vessels, which include both coastal and high-seas fleets.

Coastal fleets: West European countries currently deploy primarily coastal fishing fleets. The West European coastal fleet in 1992, totaled nearly 110,000 vessels, or about 99 percent of the total number of fishing vessels deployed by West European countries (see Appendix 1).[16] This focus on coastal fisheries reflects many factors including restrictions on access by foreign countries, lower fuel consumption and operating costs, and crew work preferences. The portion of the fleet devoted to coastal fisheries has remained constant in recent years. West European fishermen operated about 110,000 vessels in 1975 and while the number declined during the 1970s and early 1980s, the fleet by 1992 had recovered to about that same number of vessels. The difference between the West European fishing fleet in 1975 and the fleet in 1990 is that the EC now controls the bulk of the fleet (Appendix 1).[17]

High-seas fleets: West European countries also deploy high-seas[18] fishing fleets. The 1992 West European high-seas fleet was composed of 653 vessels,[19] a small fraction of the number of coastal vessels (Appendix 1). While this is less than 1 percent of the number of vessels in all size categories, the high-seas vessels (those over 500-Gross Registered Tons, or GRT) account for about 37 percent of the total fleet in terms of capacity.

The European fishing fleets have undergone major changes during the 1970s and 1980s). The overall number of vessels has not changed, but the capacity has expanded as the fishermen purchased larger, more efficient vessels (Figure 1).

- *Medium-to-large*:

There has been a gradual reduction in the number of vessels in the 500- to 999-GRT class as larger ships have been added to the fleet (Appendix 10 and Figure 2).

- *Large-to-super:*

The number of vessels in the 1,000- to 1,999-GRT class increased modestly from 243 vessels in 1975 to 273 vessels in 1992. The growth in this class reflects, to a certain extent, the construction of tuna purse seiners by French and Spanish fishing companies. These vessels are currently deployed in the Eastern Atlantic, Gulf of Guinea, and Indian Ocean.

- *Super-class:*

The number of vessels over 2,000-GRT increased from 55 in 1975 to 79 vessels in 1992 (Appendix 10 and Figure 2). The increase is due to the construction of "super trawlers and seiners." Dutch, German, and Irish fishermen are deploying these super trawlers or seiners for pelagic and demersal species in the North and South Atlantic. The vessels are equipped with processing facilities (producing fishmeal, canned packs, fillets, other frozen products, and surimi).

B. GROWTH OF THE HIGH-SEAS FLEETS

West European fleets declined during the late 1970s and early 1980s as many older vessels were withdrawn. The fleet began expanding in 1987 until overfishing resulted in management demands to trim the size of the fleet in 1991. While the current number of high-seas vessels is little changed from 1975, the fleet capacity set an all-time record in 1991 (Appendix 2 and Figure 3). This is significant as the fleet capacity is a much better indicator of fishing potential than the number of vessels.

The 3 periods in the growth of the West European high-seas fishing fleets are shown below:

1975-86: Most West European countries reported substantial declines in their high-seas fleets beginning in 1976 after many countries declared 200-mile EEZs limiting or ending foreign fishing. The high-seas fleet declined from 806 vessels in 1976 to 627 vessels in 1983, or by 22 percent (Appendix 1 and Figure 3). There was a slight increase in numbers of high-seas vessels during 1983-86 as fishermen added 3 new vessels for a total of 630 vessels by 1986.

1987-91: West European countries in 1987 began rapidly expanding their high-seas fleet, from 630 in 1986 to 684 in 1987; this amounted to 54 new ships in one year! The fleet increase continued during the next few years reaching 857 vessels in 1991 (Appendix 1 and Figure 3), or by 25 percent. The increase can be seen in both the EC fleet and non-EC fleet. The increase can be partially attributed to EC funding programs designed to modernize the fishing fleets of the member countries.

1992: The West European high-seas fleet in 1992 included 804 high-seas vessels, including 591 registered with the EC and 213 registered in non-EC countries. The 1992 total was below the peak of 857 vessels reported in 1991 and was the first decline since 1986. The authors do not yet know if this represents the beginning of an overall decline or simply a pause in the long-term increase reported since 1987.

Most West European high-seas fleets are owned and operated by fishing firms in EC-member countries. The EC high-seas fleet is one of the largest in the world. EC officials believe that the fleet is overcapitalized and that the overall fleet capacity significantly exceeds the potential of available fishing grounds.[20] EC officials believe that the high-seas fleet must be reduced, or deployed to distant-water grounds, to bring fleet capacity in line with available coastal resources. Despite EC fleet reduction programs, the number of EC vessels is little changed from 1975; the 1991 capacity was 718,000-GRT, only slightly below the 740,000 GRT reported in 1975. Despite the investment in modern, high-seas vessels by EC fishermen, the fisheries catch has slowly decreased from 6.7 million metric tons (tons) in 1980 to 6.5 million tons in 1990 before increasing to 6.9 million tons in 1992.

The decline in the EC fisheries catch through 1990 was also matched by a decline in groundfish stocks, caused by overfishing and biological fluctuations. The decline in groundfish harvests is particularly important, because these species command high prices in Western Europe and are vital to profitable operations of the fishing fleet.

Table 1.--EC. Fisheries catch, 1980, 1985, and 1992.

Country	1980	1985	1992
	1,000 Metric Tons		
Belgium	46	45	37
Denmark	2,028	1,765	1,793
France	788	838	813
Germany	307	225	310
Greece	105	115	149
Ireland	149	231	241
Italy	507	589	510
Netherlands	340	504	443
Portugal	271	306	330
Spain	1,315	1,183	1,350
United Kingdom	847	902	924
Total	6,703	6,701	6,918*

Source: FAO, *Yearbook of Fishery Statistics,* Rome, various years. *Preliminary data.

Of particular concern to the EC has been the gradual reduction in the catch of Atlantic cod (*Gadus morhua*), in recent years. Atlantic cod is highly prized in European markets and commands high prices. The decline in its catch from 463,000 tons in 1985 to 333,000 tons in 1990, has significantly reduced fishermen's profits.

Table 2.--EC. Catch of Atlantic cod, 1986-1991.

Country	1986	1987	1988	1989	1990	1991
	1,000 Metric tons					
Belgium	8	9	7	5	4	4
Denmark	154	150	128	116	99	85
France	64	48	51	48	44	12
Germany	48	46	46	44	57	34
Ireland	7	9	10	7	4	4
Netherlands	25	21	17	12	12	7
Portugal	47	2	15	25	16	14
Spain	55	42	45	42	27	27
UK	90	113	92	78	70	66
TOTAL:	498	461	411	377	333	253

Source: FAO, Yearbook of Fishery Statistics,1991 Rome, 1993.

The EC catch of Atlantic cod reportedly will decline further in 1992 and 1993. Poor recruitment, fluctuating oceanographic conditions, and overfishing makes it difficult to predict when the cod population will recover. It is expected to take several years under the most optimistic conditions.

A similar decline occurred in the North Atlantic fisheries for haddock (*Melaonogrammus aeglefinus*, which declined from 356,000 tons in 1982 to 164,000 tons in 1991), saithe (*Pollachius virens*), and whiting (*Merlangius merlangus*) fisheries. Biological fluctuations can explain part of the decline, but overfishing, EC officials claim, is the principal cause of the decline. The heavy investment in large, modern fishing vessels during 1987-90 certainly contributed to the increasing pressure on some of these stocks.[21]

Other European countries, besides the EC countries, also have high-seas fleets. The Nordic countries, however, have experience in distant-water grounds beyond neighboring countries in the North Atlantic; some have ventured off the coast of Newfoundland. In many cases the capacity of the fleets exceeds available stocks and the countries involved are concerned with how to reduce capacity. The status of stocks and economic conditions in the North Atlantic will influence the transfer of other high-seas vessels into or out of Nordic fisheries. During 1993, there was an increase in the number of large Norwegian vessels taking advantage of recovering cod stocks and the return of capelin stocks. Iceland has also seen a return in capelin in recent years. The Faroe Islands, Greenland, and Iceland, have been adversely affected by declining catches of Atlantic cod during 1990-93.

C. EUROPEAN COMMUNITY

The EC high-seas fishing fleet is overcapitalized. The Commission of the European Communities submitted its assessment of the EC fleets in 1991. EC officials concluded that the existing fleet cannot be profitably deployed on available fishing grounds.[22] Major fishery resources could be severely depleted if the existing fleet was deployed without major restrictions on effort. Such effort restrictions, however, increase operating costs and adversely affect profitability. EC officials concluded that:

> "*Stocks of round and flat fish, representing about 35 percent of stocks covered by TACs, are fully exploited or over-exploited. This is causing a perceptible decline in the volume of landings and keeping fishermen's incomes below the optimum level.*"[23]

1. The EC fleet

EC countries are some of the most important fishing countries in the world. While other countries deploy larger fleets catching more fish (China, Russia, Japan, Chile, and Peru), few other countries operate such efficient vessels producing high-quality fishery products or support such high incomes for fishermen as do the EC countries.

The 1992 EC high-seas fleet was composed of about 591 vessels having about 718,000-GRT, down about 7 percent from the 648 vessels on the EC's 1991 fleet register (Appendix 1 and Figure 4). The distant-water fleet is only a small fraction of the estimated 90,000 vessels, registering an estimated 2 million GRT in 1992, which comprises the entire EC fishing fleet. The EC fleet increased steadily from 52,500 vessels reported in 1975 to an estimated 90,000 vessels in 1992. There was a minor decline in 1985-86, followed by an increase in 1987 followed by a gradual decline through 1991 (Appendix 1 and Figure 4). The EC fleet was increased by the accession of Greece in 1981 and Portugal and Spain in 1986; all 3 countries had huge fishing fleets. Lucrative EC subsidies, designed to modernize the fishing fleet, also contributed to the growth in the fleet, beginning in 1984-85. Spanish and Portuguese fishermen were initially concerned that the EC would not be sympathetic to their needs when the two nations joined the EC in 1986. Many felt that domination by northern Europeans would hurt local fisheries. EC efforts to assist Spanish and Portuguese fishermen, by funding many fleet construction projects, helped stimulate some of the growth and served to reassure Spanish and Portuguese fleet owners that the EC was indeed concerned about their needs. The EC's willingness to allow countries time to bring their fleets into alignment gave some fishermen a "window of opportunity" between 1988 and 1992, to exceed fleet size limits without consequences. The authors also believe that some fishermen adopted a "go all out" attitude by building bigger and more efficient vessels and fishing coastal resources without concern about the consequences. Many may have also concluded that they would fare better in future EC fishery schemes if they could demonstrate a substantial fishery. This may explain why some countries suddenly began increasing the size of their high-seas fleets despite signs that the resources were already fully or even over-exploited.

2. Reducing fleet overcapacity

The EC effort to reduce overcapacity has included a variety of alternative approaches. EC rules permit the transfer of vessels to new fisheries or to non-fishing operations, restricting fishing effort (requiring fishermen to remain in port for certain periods of time, restricting grounds, or limiting fishing net mesh sizes), or deploying them in distant-water fisheries. Scrapping or selling the vessels to other countries, although permitted and encouraged, is not the normal approach taken by the EC. Most vessels withdrawn from the fishery are converted to non-fishery uses including conversion into boats for offshore oil work, houseboats, research craft, etc. A few vessels, however, are sold or scrapped.

Transferring vessels to non-fishery status: A review of the EC's decommissioning programs during 1985-86, shows that many vessels were converted into vessels designed for offshore oil use in the North Sea. Many other vessels were converted into houseboats, research vessels, or other uses.

Restricting fishing effort: EC fishery ministers have pushed hard to develop alternatives to decommissioning schemes. Restricted efforts include increasing the size of mesh to allow younger fish to escape. The EC Council established a 100 millimeter mesh size during their meeting on October 28, 1991.[24] Other options include requiring vessels to remain in port for certain days as part of a "tie-up" program.[25] Limits on landings sizes for mackerel, anchovy, horse mackerel, scallops, and whiting have also been enacted. Other measures are being examined. These methods can provide temporary relief to vessel owners and to stocks of fish. However, these provisional measures increase operating expenses and eventually undermine the profitability of EC fisheries. These stop-gap measures are, however, popular with politicians who must face irate constituents who object to more serious reductions in Total Allowable Catch (TAC) quotas or allocations.

Scrapping: Vessels which are in very poor condition can be sold for scrap. This is a viable option and scrapping does occur. The financial returns, obviously, are less than if the vessels can be sold for other uses. Past experience suggests that vessel owners will attempt to maximize their investments in these vessels by converting the vessels to non-fishery uses and will attempt to sell them as second-hand, reconverted vessels at prices considerably higher than prices paid for scrap metal.

Sale to third countries: EC vessels are frequently sold to third countries. *Fishing News International* devotes several pages to the trade in fishing vessels and EC vessels are frequently included in this section. The failure of the EC to locate suitable distant-water fishing grounds, especially for Spanish vessels, is likely to result in a large number of Spanish vessels being offered for sale in the coming years. The authors, however, believe that EC negotiators will be able to negotiate access to Namibian waters and thus do not expect to see significant numbers of vessels being sold in the near future.[26]

Deployment to distant grounds: European fishermen deployed many of their high-seas vessels in distant-water fisheries long before the EC was given the authority to negotiate international fishery agreements on behalf of EC member states.[27] These distant-water fisheries changed significantly between 1960 and 1980, as nations extended their 200-mile fishery limits. By 1980, 200-mile EEZs had been announced by 93 countries, covering 130 million square kilometers or nearly 35-percent of the world's ocean area and almost all of the important fishing grounds. This global shift in marine jurisdiction impacted on EC fishing nations and made it imperative that the EC aggressively seek new outlets for its fishing fleet.

International agreements have been used effectively by the EC to deploy its massive fleet to distant fishing grounds. Many of these agreements were pre-existing: neighboring state to neighboring state or bilateral agreements between European countries and their former colonies. The EC's task, in many cases, was simply to negotiate extensions of these treaties on behalf of all its member states. In other instances, however, negotiations had to be initiated with new partners. The EC has gone on to establish an intricate, far-flung series of fishery accords stretching from the United States to the Baltic Sea and from Morocco around the Cape of Good Hope and out into the Indian Ocean. These arrangements have been negotiated at considerable expense, although the total cost and an assessment of the benefits actually accruing to the EC are not available. An examination of the existing EC network of fishery agreements is presented in subsequent sections of this report. The EC would now like to extend the range of its fishery arrangements with a series of agreements in Latin America. Some observers believe that the EC will encounter more difficulty in negotiating in Latin America than they encountered in Africa. The ability of the EC to conclude meaningful fishery accords in Latin America is yet to be demonstrated.

Some EC-member nations will be impacted more than others as the EC restructures the Community fishing fleet to bring fishing capacity in-line with available resources. Most countries will have to reduce the number of vessels in their high-seas fleets. In some instances (especially Spain) the reductions will be significant and cause considerable economic dislocation. Some countries, however, will be able to expand their fleets because they have already reduced their fleet size and will be in a position to expand their fleets in the future with vessels better designed to harvest available resources profitably.

D. NON-EC EUROPE

Non-EC countries, especially the Nordic countries, also have overcapitalized fleets with capacities exceeding available resources. The non-EC high-seas fleets have nearly doubled from 114 vessels in 1975 to 213 vessels in 1992 (Appendix 1 and Figure 5). This is out of a total fishing fleet of approximately 20,000 vessels of all descriptions. Much of the increase has been reported by Norway, but most of the countries involved report expanding fleets. The Faroe Islands have faced economic dislocations in recent years and many fishing vessel owners have faced bankruptcy; these individuals are attempting to sell their vessels. The same situation is true in Iceland where poor recruitment, unfavorable oceanic conditions, and overfishing have resulted in lower quotas for the lucrative Atlantic cod. This also has prompted some vessel owners to sell their vessels. Cyprus, Malta, and Turkey operate only one or two high-seas vessels. Information on these vessels and their fishing grounds and operations is scant.

The non-EC countries, especially the Nordic countries, have programs similar to the EC to assist fishermen in modernizing their fishing fleets. These include subsidies to purchase new vessels or to upgrade older vessels. Some countries encourage fishermen operating older vessels to convert them to other uses or to scrap the vessels. Unlike the EC, however, the Nordic countries do not have a systematic program to negotiate access to distant fishing grounds for their fishermen.

E. CANADA

Canadian fisheries are divided between their Atlantic and Pacific Ocean fisheries. Atlantic Canada's fisheries have been buffeted by major difficulties in recent years as biological fluctuations, oceanic conditions, and overfishing (by domestic and offshore foreign fleets) have combined to reduce stocks of key species to record lows. In 1992-93, the Canadian Government has promulgated tough new conservation regimes that virtually stopped all fishing for some species. Canadian fishermen, in the past, have shown little or no interest in fishing beyond their 200-mile EEZs.

F. SUMMARY

The authors project the following basic trends in the West European high-seas fleets:

1. EC fleet

- **Redeployment to Argentina**: The EC has arranged to redeploy 70 EC high-seas vessels to Argentina. It is not yet clear, however, when the agreement will be ratified by the Government of Argentina. EC member states ratified the agreement in September 1993.[28] Some owners are refitting their vessels for the South Atlantic in Spanish shipyards.

- **Redeployment to Namibia**: The EC is likely to give considerable priority to negotiations with Namibia. The authors have no information on the Namibian Government's view of the EC proposals. It is likely, however, that the Namibians will demand considerable remuneration for access to their EEZ, including EC assistance in launching a local fishing industry. In addition, Namibian officials may severely restrict the number of vessels permitted to operate in their EEZ. Whatever the outcome, it is likely that EC fishermen will have more limited access at much higher costs than was the situation before Namibian independence.

- **Stricter EC fleet reduction programs**: The authors expect that the EC will take a much firmer approach to decommissioning schemes and will demand significant reductions before allowing modernization or new vessel construction grants to be approved. The EC has already announced that it will not award any grants for new vessel construction in 1993.[29] This reflects a new, tougher approach to the question of fleet size.

2. Non-EC fleet

The authors believe that it is unlikely that large numbers of high-seas vessels from the non-EC Nordic countries will be sold or redeployed in distant-water fisheries during the next few years. This is especially true for Norway, where fishermen are reporting excellent catches. Low recruitment of northern cod and other high-value species, however, will adversely affect earnings of Icelandic and Faroese fishermen. This may force the sale of small numbers of high-seas vessels from these two countries. Thus the authors believe that 15+ vessels from the Faroe Islands might be sold in the next two years along with 10+ vessels from Greenland. The authors also believe that a few ships, possibly as many as 5+ vessels, might be sold by Norwegian firms for a variety of reasons, including the desire to purchase more modern vessels. Many of these ships are likely to be purchased by buyers in South America or in the Commonwealth of Independent States, although at this time, this is speculation.

3. Reflagging

West European fishermen began reflagging their vessels in significant numbers in 1993. Examples of reflagging by West European vessels have been found in **Belize** (a minimum of 2 vessels), **Cayman Islands** (3 vessels), **Cyprus** (31 vessels), **Dominican Republic** (a minimum of 2 vessels), **Malta** (33 vessels), **Panama** (28 vessels), **St. Vincent** (a minimum of 3 vessels). A Belgium company and a Spanish company are currently operating reflagged Taiwanese longliners out of **Honduras.** Reflagging by European vessels increased dramatically in 1993. Reflagging of West European and Canadian vessels was not a significant in 1991, involved a few vessels in 1992, but involved over 100 vessels in 1993.

Table 3.--Former West European and Canadian fishing vessels reflagged in foreign ports, 1993.

Country	Reflagged vessels
	Number
Belize	2
Cayman Islands	3
Cyprus	31
Dominican Republic	2
Honduras	(8)
Malta	33
Panama	28
St. Vincent	3
Total	102 - 110

Source: Office of Naval Intelligence, U.S. Navy. Vessels identified under Honduras are not identified as European vessels, but have names similar to those found in European fleets. Not all vessels are recent additions: some of the vessels listed under Malta have operated under the Maltese flag for over 15 years.

SOURCES

Eurofish Reports, various issues.

European Community, Report 1991 from the Commission to the Council and the European Parliament on the Common Fisheries Policy, *Commission of the European Communities,* SEC(91) 2288, Brussels, December 18, 1991.

FAO, *Yearbook of Fishery Statistics, Catches and Landings, 1991,* Vol. 72, United Nations, Rome, 1993.

Fishing News International, April 1993.

Hinton, Michael. "Estimated Catch and Fleet Information for the Eastern Pacific Ocean Tuna Fleet," *Inter-American Tropical Tuna Commission*, Report No. 93-23, January 1-July 19, 1993.

Office of Naval Intelligence, U.S. Navy.

United States Embassy, Oslo, Norway.

Weidner, Dennis, and Jacobson, Don. "Soviet-Latin American Fishery Relations," *International Fishery Report,* (IFR/88-108) Office of International Affairs, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., December 16, 1988.

ENDNOTES

1. The number of vessels actually fishing on the high-seas is uncertain. Most of these vessels normally fish in the North Atlantic, but are able to move quickly to distant fishing grounds.

2. Estimated.

3. Again, this is an estimate.

4. The EC approved the agreement with Argentina in September 1993. No information is available on the ratification process by the Government of Argentina. "Ministers Approve EC-Argentine Agreement, *Eurofish Report*, September 23, 1993, p. BB/3.

5. These German-flag vessels are owned by Doggerbank Seefischerei, a wholly-owned subsidiary of the Parlevliet & van der Plas BV of Holland.

6. Three of these vessels are owned by the same Dutch fishing company.

7. Michael Hinton, "Estimated Catch and Fleet Information for the Eastern Pacific Ocean Tuna Fleet," *Inter-American Tropical Tuna Commission*, Report No. 93-23, January 1-July 19, 1993.

8. The only country which operated a significant number of vessels in Argentine waters was the Soviet Union. For details see Don Jacobson and Dennis Weidner, "Soviet-Latin American Fishery Relations," *International Fishery Report,*(IFR/88-108) Office of International Affairs, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., December 16, 1988.

9.The EC approved the agreement with Argentina in September 1993. No information is available on the ratification process by the Government of Argentina. "Ministers Approve EC-Argentine Agreement, *Eurofish Report*, September 23, 1993, p. BB/3.

10. "Late News: Date for start of Namibia talks nearing," *Eurofish Report*, April 22, 1993, p. BB/2.

11. EC sources reported that negotiations are to begin i the autumn of 1993. "New Council mandate sought for Namibian talks," *Eurofish Report,* May 20, 1993, p. BB/3.

12. Michael Hinton, *op.cit.*

13. This number could easily reach 60 vessels and is used only as a general guideline.

14. Office of Naval Intelligence, U.S. Navy.

15. "Norway acts on fishing in Barents Sea "Loophole," U.S. Embassy, Oslo, Norway, August 18, 1993. The vessels were registered in Belize, the Dominican Republic, and St. Vincent. The vessels reportedly are backed by Faroese capital. The vessels were unloading their catch in Iceland.

16. Estimate.

17. The accession of Greece, Portugal, and Spain added many thousands of vessels to the EC fleet and withdrew the same number from non-EC fleet statistics.

18. Vessels over 500-gross registered tons (GRT) are considered as high-seas fishing vessels. Vessels between 100- and 499-GRT are considered coastal vessels while those under 100-GRT are classified as artisanal or inshore vessels. Unfortunately, this does not always work out, since some vessels in the 100- to 499-GRT range are frequently classified as high-seas vessels.

19. Based on data as of June 30th.

20. Report 1991 from the Commission to the Council and the European Parliament on the Common Fisheries Policy, *Commission of the European Communities,* SEC(91) 2288, Brussels, December 18, 1991.

21. EC scientists claim that sustainable fisheries require a cod biomass of 150,000 tons and a haddock biomass of 100,000 tons. These scientists claimed that the biomass was 78,000 tons and 81,000 tons, respectively during the years 1989-91. It was stated that at this rate the resource in the North Sea would be wiped out within 5 years. A 40 percent reduction in fishing effort in the North Sea was recommended. *Eurofish Report,* September 26, 1991.

22. "Fishing is an economic activity which traditionally offers a poor return on capital. It is at present suffering from over-investment against increasing shortages of raw materials, resulting above all in excess fishing capacity. This situation is exacerbated by the fact that over-investment makes the "fishing race" even keener." Commission of the European Communities, "*Report 1991 from the Commission to the Council and the European Parliament on the Common Fisheries Policy*," Sec(91) 2288, Brussels, December 18, 1991, p. ii.

23. Commission of the European Communities, "*Report 1991 from the Commission to the Council and the European Parliament on the Common Fisheries Policy*," Sec(91) 2288, Brussels, December 18, 1991, p. ii.

24. This was considerably less than the 120 mm size originally proposed. *Eurofish Report*, November 7, 1991.

25. The EC Fishery Minister established a "tie-up" program requiring vessels fishing for cod or haddock in the North Sea and off western Scotland to remain in port for 8 consecutive days each month as a conservation measure for fragile stocks in those areas. *Eurofish Report*, December 19, 1991.

26. The authors may be overly optimistic on the chances for success. Namibian waters are clearly of great importance to the EC. The authors believe that the Namibians will become increasingly interested in selling their fishery resources, especially the highly prized hake, in European markets. As stocks gradually recover, the Namibians will become more receptive to EC proposals. The EC have proved themselves to be skilled negotiators with ample funds at their disposal. It would appear that it is only a matter of time before both parties reach an amicable solution and fishing can be resumed.

27. Authority for the EC to negotiate international fishery agreements on behalf of member states was given on October 30, 1976. A systematic approach to negotiating fishery agreements was outlined in the Common Fisheries Policy enacted in 1983.

28.The EC approved the agreement with Argentina in September 1993. No information is available on the ratification process by the Government of Argentina. "Ministers Approve EC-Argentine Agreement, *Eurofish Report*, September 23, 1993, p. BB/3.

29. "EC agrees grants worth 23 million ECU," *Eurofish Report*, May 6, 1993, p. BB/1.

2

EUROPEAN COMMUNITY

The European Community[1] (EC) is responsible for managing the fisheries of its member states. Responding to the increasing worldwide acceptance of 200-mile coastal EEZs, the EC declared a 200-mile EEZ on January 1, 1977. Greece joined the EC in 1981 and was followed by the accession of Portugal and Spain in 1986. This gives the EC control over fishing grounds from the Shetland Islands to the Canary Islands. The EC also faces the daunting task of negotiating fisheries arrangements with the countries bordering on the Community's EEZ because of the many countries and wide range of fishery zones affected. Many of the important fishery stocks are transboundary, meaning that the effective management of these resources requires cooperative arrangements with neighboring countries, including: Russia, Estonia, Latvia, Lithuania, Poland, Finland, Sweden, and Norway in the North Sea and Baltic Sea, Turkey, Syria, Lebanon, Israel, Egypt, Libya, Tunisia, Algeria, Morocco, Albania, and the former Yugoslav states in the Mediterranean and Adriatic Seas, and Morocco in the Central Eastern Atlantic. EC fishery zones range from Arctic to saharan waters.

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I. GENERAL

The task faced by the EC is complicated by responsibilities unique to individual member states. **Denmark** is responsible for conducting the international negotiations for Greenland and the Faroe Islands. The **United Kingdom** is responsible for the Falkland, South Sandwich and South Georgia Islands. **France** is responsible for various jurisdictions in the Atlantic Ocean (St. Pierre and Miquelon and French Guiana) and the South Pacific (New Caledonia and Cliperton). These national responsibilities can affect overall EC goals. The EC negotiated a fisheries agreement with Argentina, that was influenced by UK policies on the Falklands, South Georgias and South Sandwich Islands.

The EC manages one of the world's largest and most diverse fishing fleets. EC fleets in 1993 fished from the Baltic and North Atlantic to the South Atlantic, and into the Indian Ocean. The 1992 EC fleet consisted of over 90,000 vessels, ranging from small coastal boats to giant factoryships. Each EC country deploys some vessels, but is dominated by the massive Spanish, French, Greek, Italian, Portuguese, and U.K. fishing fleets. While most of these vessels were deployed in coastal fisheries, the EC fishermen also conduct major distant-water operations, deploying 591 high-seas vessels in 1992.[2]

The EC uses two important approaches in managing its fisheries: the Common Fisheries Policy (CFP) and international agreements. Both are key to controlling the size and deployment of the EC high-seas fishing fleet.

II. COMMON FISHERIES POLICY

The formulation of the CFP proved a very difficult undertaking. The EC was formed in 1957. Member states implemented several important programs including the difficult task of formulating a common agriculture policy. The EC fishing industries constituted an economic activity much smaller than the EC agricultural sector. Even so, agreement on a common fisheries policy proved much more difficult to negotiate. The difficulties escalated when the United Kingdom entered the Community in 1972. The UK entry substantially increased the size of Community waters, adding important fishing grounds in the North Sea. Britain's already beleaguered fishing industry's concern over the possibility of allowing other member countries access to its extensive coastal grounds further complicated the formulation of a CFP. As a result, agreement on the CFP proved elusive. Discussions continued throughout the 1970s with little progress. EC fishermen were experiencing increasing difficulties as major fishery stocks steadily declined because of expanding fishing effort. Their increasing difficulties left them unwilling to make the kind of compromises required to formulate a common Community policy. Internal EC differences were complicated by major changes in international legal conventions. During the 1970s, an increasing number of countries declared 200-mile coastal zones and limited or excluded distant-water countries. U.K. fishermen who operated extensively off Iceland were particularly impacted. Idled distant-water fleets complicated the CFP negotiations. Additional problems resulted from the entry of Greece into the Community in 1981, increasing the size of the EC fleet by 31,000 vessels (mostly small coastal vessels).

The EC member countries finally reached agreement on a CFP on January 25, 1983. The legal basis for EC policy is included in Articles 39, 42, and 43 of the Treaty of Rome[3] and in the Acts of Accession of Spain and Portugal. The CFP was designed to take into account events which had taken place in European and world fisheries requiring certain new regulatory approaches. These events include: (1) Changes in the Law of the Sea leading to the proliferation of 200-mile EEZs which adversely impacted the fishing fleets of several EC member states. (2) The declining stocks of many key species in the EC fishing zones which required the EC to restrict fishing effort.

The central components of the CFP included: (1) adjusting the size of the fishing fleet to changing conditions; and (2) intensifying management regimes to promote the return of depleted fishery resources to levels of maximum sustainable yields (MSY).[4] The CFP allowed the EC for the first time to address the difficult problem of fisheries management on a Community-wide basis. The CFP includes provisions for increasing productivity, providing a fair standard of living for producers, stabilizing markets, and ensuring the availability of fishery products to consumers at a reasonable price. A key feature of any EC management program is regulation of the fishing fleet.

The CFP contains many provisions affecting the fishing fleets of member countries. Effort has been made to limit the fleet, with one EC program paying member countries to reduce the size of its fishing fleets.[5] The EC efforts to regulate the size of their fishing fleets involve a multi-pronged approach:

- Payments to scrap older fishing vessels;[6]

- Incentives to move vessels out of depleted or overfished zones into new fisheries, into aquaculture operations,[7] or into non-competing activities;

- Incentives to enter into joint venture operations in distant-waters where fishing rights have been negotiated with non-EC countries.

- Payments to sell vessels to non-EC countries. Commercial pressures and the loss of distant-water fishing grounds have affected fleet size. Some EC programs during the 1980s, however, have actually promoted vessel construction.

III. FLEET MODERNIZATION[8]

The EC policies on fleet size were a key element in the negotiations leading to the CFP. It was unclear to EC officials in the 1970s just what fleet management policies would be required. The EC fleet was barely contracting despite higher fuel costs, lower harvests, and impaired profits due to labor-intensive aging vessels. The EC reported approximately 51,100 registered fishing vessels of all types in 1970 versus 50,800 vessels by 1980 (Appendix 17).[9] Many EC administrators were convinced in the early 1980s that the problem they faced was not the size of the EC fleet, but rather how to modernize the fleet to face the changing realities of the 1980s.[10]

The EC initiated fleet programs in the mid-1980s as soon as the CFP was implemented. One EC program was aimed at fleet reduction and was designed to replace inefficient and outdated vessels with more modern vessels. The program, however, did not prove effective. Different EC programs had conflicting goals. Other EC programs actually offered financial assistance to promote vessel construction. As a result, while the fleet declined in the early 1980s, the trend was reversed by 1986; the overall fleet by 1992 had 91,200 vessels as compared with 50,800 vessels in 1980 and 51,100 vessels in 1970 (Appendix 17 and 18).

EC actions during the 1980s failed to restrict the expansion of the EC fishing fleet. Fishermen continued to experience financial problems because the fleet was badly over-capitalized. Worse still, the failure to limit fishing effort resulted in the depletion of several important commercial stocks with severe adverse economic and social costs to fishery communities. This increasingly severe problem led to renewed demands for EC action.

The EC Council of Ministers met in 1990 to address the matter. The EC decided to control effort by enacting tough new measures to reduce the size of the fishing fleet. The EC initially decided to reduce the fleet by 40 percent as recommended by some biologists. Political realities, however, have blunted the sharp cutbacks recommended by biologists. EC politicians are currently exploring alternative measures. Some observers believe, however, it is just such adjustments to political pressures that prevented the EC from achieving the initial CFP goals.[11] It is unclear if the new EC measures will actually succeed in reducing the size of the fleet. While some observers believe that the tough new EC measures will finally force countries to withdraw vessels from their fleets, others question whether the scaled-back fleet reduction measures will permit depleted stocks to recover and if so, over what time frame.

A. FLEET TRENDS, 1983-86

The EC initiated several major programs affecting EC fishing fleets. The programs were approved in connection with the long-delayed agreement on the CFP in late 1983. The EC fleet projects included efforts to modernize existing vessels and to build new vessels, as well as to withdraw older, less efficient vessels from the fleet. Thus, the fleet (all vessels) went from 83,000 vessels registering 2.1 million tons in 1983 to 86,000 vessels registering 2.0 million tons in 1986 (Appendices 14 and 18) . The high-seas fleet went from 260 vessels registering 0.3 million tons in 1983 to 458 vessels registering .5 million tons in 1986 (Appendices 1 and 2 and Figure 3). This increase in the number of vessels can be attributed to the accession of Portugal and Spain to the EC in 1986, both having major fishing fleets.

The EC conducted major programs to modernize existing vessels and build new, more efficient vessels. In 1985 alone, the EC provided financial support for 753 projects involved in the building or modernization of fishing vessels. Information on the total program, unfortunately, is not available. The authors are not able to demonstrate the number of old vessels withdrawn as against new vessels or modernized older vessels. The EC Council also initiated a program to withdraw older inefficient vessels from the fishing fleet in October 1983.[12] This Council Directive required member states seeking EC funding to eliminate fishing vessels to ensure that the vessels were scrapped, transferred to a third country, or assigned to purposes other than fishing in Community waters.[13] All vessels receiving financial payments were thereafter permanently barred from fishing in Community waters. As a result of Council Directive 83/515/EEC, the member states acted to withdraw a number of fishing vessels from their rolls (Appendix 26).

1985: The EC reported that a total of 122 vessels were withdrawn. **Belgium** sold 3 ships to The Gambia and one to Senegal, turned 1 vessel into a training vessel and 1 into a pleasure craft, and scrapped the remaining 4 vessels. **Denmark** converted 6 vessels into pleasure craft, scrapped 3 ships and sold one vessel to Greenland. All of the **Dutch** boats were sold to Nigeria. The **United Kingdom** scrapped a total of 25 vessels, sold 5 vessels, and refitted the rest, mostly for the booming offshore oil business, pleasure/house boats, or diving. The vessels ranged from small, coastal vessels (under 50-GRT) to fairly large, high-seas vessels, including the 1,550-GRT British vessel, the *Sir Fred Parkes*.[14]

1986: The EC scrapped 41 vessels, sold 41 vessels to third countries, and converted another 241 vessels to other uses. Although it was never officially stated, it appears that the program was successfully removing inefficient vessels and replacing them with more modern vessels.

The EC was faced with a major revision of the CFP and its fleet management efforts when Spain and Portugal entered the Community on January 1, 1986. Both countries, but especially Spain, had large fishing fleets (Appendices 3 and 18), but limited coastal fishing grounds on which to deploy its vessels. Both countries posed the additional problem in that both their high-seas fleet as well as a substantial portion of their coastal fleet are cable of operating off neighboring EC countries with already fully exploited fisheries. The two countries increased the size of the EC high-seas fleet by 219 vessels, Portugal (74 vessels) and Spain (145 vessels). Clearly, the overall EC fleet management effort would have to be significantly modified.

B. FLEET TRENDS, 1987

EC officials increasingly saw the need to limit the fishing fleets of member countries. Not only did the integration of the Spanish and Portuguese fleets present real problems that would require substantial adjustments to the CFP, but fleet trends in various countries reversed. Several countries reported increases in the size of their fishing fleets. For the first time in several years, the EC fleet actually expanded in 1987. The increase in the size of the fleet began as the spawning stock biomass of Atlantic cod and haddock, in the North Sea, was beginning to decline; unfortunately, at that time the declines were explained away as being a temporary biological fluctuation. Few fishermen accepted the advice of scientists who were growing concerned about the future of some fisheries.[15]

EC member states attempted to correct the situation in late 1987 when they agreed to establish target goals for reducing the size of their fishing fleets. The EC Commission approved the Multi-Annual Guidance Program (MAGP) for the member states in December 1987.[16] The MAGP established the first listing of fishing vessels effective January 1, 1987, by tonnage and engine power, and established decommissioning objectives for December 31, 1989, 1990, and 1991 (Appendix 27).

C. FLEET TRENDS, 1988-89

EC officials concluded in early 1988 that efforts to control the size of the fishing fleet were not working. Indeed, the EC fleet was expanding (Appendices 1-2, 13-14,17-18 and Figure 3-4). The high-seas fleet, for example, went from 584 vessels registering 615,000-GRT in 1988 to 607 high-seas vessels registering 650,000-GRT in 1989. The total EC fleet, however, declined from 96,700 vessels to 95,200 vessels. The EC temporarily halted the awarding of grants for new vessel construction in mid-1988 because member states were not reducing fleet tonnage by 3 percent and engine power by 2 percent as agreed in 1987. At the meeting of the EC Fisheries Council in Cuxhaven, West Germany, in April 1988, only Denmark and Portugal were able to prove that they were not expanding their fleets beyond EC guidelines. During the December 22, 1988, meeting of the Council, France argued for additional time to meet the decommissioning guidelines and the Commission agreed to the French appeal. Accordingly, funding for vessel modernization and new vessel construction was resumed. As part of the agreement, the EC insisted upon the establishment of an EC register of all fishing vessels to exist alongside national registers.[17]

The EC continued to administer a fishing vessel construction and modernization program that allowed member-state fleets to expand without strict controls. The result of this policy was that coastal and high-seas fleets expanded rapidly and the effort to reduce the overall size of the EC fishing fleet failed. The implications of this policy became apparent in 1990.

D. FLEET TRENDS, 1990-92

The EC Council of Ministers met on June 27, 1990, in Luxembourg. EC officials presented graphic evidence that the program to limit the size of the EC fishing fleet was not working. EC Minister Marin announced that a reduction of between 30- and 40-percent of EC fishing capacity would be necessary to reduce pressure on fishery resources.[18] This was in contrast to the EC's established program to reduce the size of the fleet by 3 percent in tonnage and 2 percent in engine power between 1987 and 1991.[19] As a result of the discussions, the EC Council voted that all grants to build new fishing vessels be temporarily stopped. EC financial support for continued building of new vessels was clearly undermining efforts to reduce the size of the fishing fleet and to protect fishery stocks. It was apparent that the MAGP was not keeping pace with fleet expansion. In 1990, for example, the EC provided vessel modernization grants for 230 projects, with Spain receiving funding for 98 projects.[20] The EC Council approved a new program to include small vessels under 12 meters (m) in length or 9 m between perpendiculars, under the decommissioning program. The legislation also amended Regulation (EEC) No. 4028/86 to promote further exploratory fishing voyages, redeployment operations, joint ventures, and joint enterprises. Financial assistance to firms interested in taking advantage of fishing operations, including those in distant-waters, was promoted under this amended program.[21]

EC fishery officials still face the daunting task of reducing the existing fleet to a more realistic level reflecting the availability of exploitable stocks. The EC high-seas fleet increased from 623 vessels (670,000-GRT) in 1990 to 648 (718,000-GRT) vessels in 1991, but the impact of EC fishing fleet reduction programs was only felt in 1992 when the fleet declined to 591 vessels (estimated 646,000-GRT, Appendices 1 and 2). The entire fleet declined from an estimated 91,200 vessels to an estimated 90,000 vessels in the same period. EC fishermen continue to experience declining catches of many traditional species as a result of steady expansion of the Community fleet during the late 1980s. Further, EC officials noted that 90 percent of North Atlantic stocks of cod, haddock, saithe, etc. were overfished. The resulting lower yields, as well as rising consumer demand, had combined to make the EC the world's largest importer of fishery products. The declining catch in EC waters meant that EC fishermen had to turn increasingly to the high-seas and other distant-water grounds.

E. OUTLOOK, 1993-96

EC scientists and administrators are convinced that a major reduction in the fishing fleet is needed. EC scientists recommended a 30- to 40-percent reduction[22] in fleet capacity if fishing capacity is to match resources. A fleet reduction of such magnitude, however, would result in severe financial and social dislocation, especially in coastal communities. EC Ministers, faced with political pressures from fishery constituencies, agreed to cut the planned reduction of demersal fleets by only 20-percent and bottom/beam trawlers by only 15-percent under a compromise reached on November 23, 1992.[23] The reductions, part of the 1993-96 MAGP, will not require all such vessels to be withdrawn from the fleet; some reductions will take the form of effort restrictions (i.e., tie-up programs or increased mesh sizes). Biologists are concerned, however, that such half measures may not reduce effort sufficiently to allow depleted stocks to recover. Because fishing vessels may not be withdrawn from the fleet, the planned restrictions will probably not reverse the declining earnings trend. The *1991 Report from the Commission to the Council and the European Parliament on the Common Fisheries Policy* recognized the importance of declining earnings as a key item affecting EC fisheries in the Executive Summary.[24] Restrictions on effort increase operating costs and may have a serious impact on earnings unless the management programs results in the recovery of depleted stocks.

Almost all EC countries will have to reduce the size of their fishing fleets in the next few years if they are to meet EC 1996 fleet level targets. Such reductions are likely to occur even if management programs restricting effort (tie-up programs or increased mesh size regulations) are used. Two countries (Greece and the U.K.) report notable failures to meet 1991 targets (Appendix 28). Several other countries will have to withdraw substantial numbers of vessels from their fleet to meet future targets.

EC observers are uncertain about how many vessels must be decommissioned and how many of those are likely to be high-seas fishing vessels. The EC fleet management program projects the withdrawal of fishing vessels totaling 184,439-GRT between 1992 and 1996, or approximately 61,500-GRT annually (Table 5). This suggests that large numbers of vessels will be decommissioned over the next few years. The EC will make most of the reductions in fisheries where resources are depleted, i.e., primarily coastal fisheries. The EC is less likely to withdrawal high-seas vessels because they are usually deployed outside the EC EEZ and as a result do not normally cause complaints from politically vocal EC fishery trade associations representing members conducting coastal fisheries. The Spanish distant-water fleet may be an exception as such a large number of vessels remain idle in port. Thus there is certain to be a considerable EC effort to find new fishing grounds or to scrap a large number of vessels.

The MAGP came under criticism in March 1993 for failing to achieve its objectives. The *Court of Auditors Special Report no. 3/93* stated that $400 million[25] worth of MAGP grants between 1987 and 1990, made "*only a very limited contribution to the aim of reducing the capacity of the Community fishing fleet.*"[26] The Auditors noted that decommissioned vessels were frequently replaced by others with greater capacity. The Auditors also noted that modernization programs frequently increased fishing activity. In their review of the MAGP, the auditors reported that Belgium, Greece, Ireland, the Netherlands, and the UK ended 1991 with a greater fishing capacity than in 1987![27] It was noteworthy that the EC announced shortly thereafter that it would **not** award any grants for vessel construction in 1993.[28]

IV. INTERNATIONAL NEGOTIATIONS

The second key aspect of the EC's program to control fishing fleet capacity, especially for high-seas vessels (although smaller vessels are frequently involved), is the program to negotiate international fishery agreements. The EC began negotiating international fishery agreements in 1977, by signing an agreement with the United States, and has signed 29 additional agreements between 1977 and 1992. The authors estimate that the EC paid $844 million in 1992-93 alone for the right to fish in the coastal zones opened by the various fishery agreements (Appendix 25).[29] In addition to these direct cash transfers, the EC has made substantial payments for a variety of related services, such as scientific research, marketing, and training. The authors have been unable to estimate the full cost of these payments.

A. GENERAL

The EC has the legal authority to negotiate international treaties on behalf of member states.[30] The CFP provides the EC with the mandate to negotiate fishery agreements and the EC has used this approach to lessen pressure on heavily fished domestic stocks. The EC inherited the fishery agreements negotiated by member states and has subsequently negotiated an extensive network of additional fishery agreements with more than 28 countries covering a wide range of fishery activities.[31]

B. TYPES OF AGREEMENTS

The agreements negotiated by the EC cover a wide range of activities.[32] While the primary EC interest is in access to fishing grounds for its fleet, coastal countries have insisted on a variety of specific arrangements to meet the needs of their own industries. While the agreements can be divided into five basic types, it should be noted that an assortment of approaches used ins some agreements may include differing elements as well as differing combinations. The five basic types of agreements are:

- **Access/reciprocal**: The EC has negotiated several reciprocal fishing arrangements to obtain access for EC fishermen to foreign EEZs in exchange for access to the EC EEZ. This type of agreement has been negotiated with northern tier countries such as Norway, Sweden, Greenland, and the Faroe Islands.

- **Access/surplus stocks**: The EC has negotiated access to stocks that coastal countries have determined to be surplus. In exchange, the EC has provided various forms of financial compensation, from fishing fees to a variety of other payments, and assistance such as scientific research and training. The EC's Governing

International Fishery Agreement (GIFA) with the United States is the only example of this type of international agreement in the northern tier. The EC has, however, negotiated many such agreements with African countries. EC payments to various African countries in 1992-93 amounted to an estimated $817 million in the form of licensing fee payments, scientific research assistance, infrastructure development funds, on-shore training facilities, and joint venture arrangements (see Appendix 25). These agreements are critical to the EC distant-water fisheries, providing access for approximately 50-60 tuna seiners and longliners and over 600 to 800 trawlers (fish, cuttlefish, and shrimp).[33]

- **Market access**: The EC has negotiated access to fish stocks in exchange for special access programs to the EC market. Under such an arrangement, the EC has in the past offered reduced tariff quota rates for certain fish originating in Canada.

- **Joint ventures**: The EC has offered special access to its markets as an inducement to promote joint ventures. This has usually taken the form of an EC umbrella agreement with the coastal country to establish the conditions under which joint ventures could be negotiated. EC companies then negotiate with local partners, usually offering to transfer fishing vessels. This option does not usually involve financial payments to the host country. The EC has used this approach with Argentina in the agreement signed in December 1992. The EC is also offering similar arrangements to other Latin American countries.

- **Multilateral organizations**: The EC has also joined many international fishery organizations, including the International Commission for the Conservation of Atlantic Tunas (ICCAT), Baltic Sea Fisheries Commission, Northeast Atlantic Fisheries Commission (NEAFC), The Convention on the Conservation of Antarctic Marine Living Resource (CAMLAR), North Atlantic Fisheries Organization (NAFO), North Atlantic Salmon Conservation Organization (NASCO), International Commission for Southeast Atlantic Fisheries (ICSEAF), International Council for the Exploration of the Sea (ICES), General Fisheries Council for the Mediterranean (GFCM), and other international bodies. Many of these bodies are responsible for a variety of management regimes affecting both the EC and the coastal countries where EC vessels conduct distant-water fisheries.

C. FISHERY AGREEMENTS

The EC has negotiated international fishery agreements creating an extensive network of agreements involving nearly 30 countries stretching from the island of Dominica in the Caribbean, across the North Atlantic and down into the South Atlantic to Argentina andAngola. Other agreements extend EC distant-water fisheries into the Indian Ocean, as far as the Maldives. The authors have obtained considerable details on the EC agreements with European and North American countries, but the available information on the EC agreements with some African countries is less complete.[34] Even so, the available information reveals an impressive network of fishery agreements developed by the EC. This network of agreements permits EC fishing companies to mount extensive distant-water fisheries as well as participate in a variety of joint ventures, operating both locally based coastal vessels and distant-water high-seas vessels. The EC has negotiated access for a substantial but unknown number of tuna vessels and trawlers. This effort has proven costly for the EC. The EC reportedly paid an estimated $566 million in 1992 alone for foreign fishing licenses. Early agreements with Morocco allowed 800 to 1,000 coastal vessels to fish off Morocco; the latest agreement has placed a limit of 600 vessels on EC countries allowed to fish in Moroccan waters. The licensing payments, however, are only part of the cost to the EC which also provides a variety of other payments for financing research, training, marketing, and other activities required under the various agreements. Both licensing and other payments are substantially larger than the payments initially involved in the earlier EC agreements. The increases reflect the increasing sophistication of the African countries with which most of these agreements have been negotiated. The Africans increasingly realize the value of fishery resources and the EC's need to obtain access to distant-water ground. The political demands by idled fishermen appear to be causing member countries to demand EC funding, even in excess of the value of fish catches obtained. The African countries, as well as the Latin American countries where the EC would like to open access, can be expected to escalate their monetary demands. It is unclear just how willing the EC will be to meet these demands. Political pressures from member states with large distant-water fleets, however, are likely to be intense for several years as the EC fleet management program forces countries to reduce fleet sizes.

1. North America

Several EC member countries, especially Spain and Portugal, have for centuries conducted important fisheries in the Northwest Atlantic off Canada and the United States. The increasing fishing effort depleted stocks and forced Spain and Portugal to act to limit expanding distant-water fishing by the Soviet Union and European countries. At first both Canada and the United States worked through ICNAF.[35] When this proved ineffective, Canada and the United States declared 200-mile zones requiring foreign countries to negotiate access.

- **United States**: The first fishery agreement the EC negotiated was with the United States in 1977.[36] The GIFA gave EC vessels access to surplus fish in the U.S. 200-mile EEZ.[37] The GIFA provided EC vessels an opportunity to fish in U.S. waters until the process of "Americanization" of U.S. fisheries led the U.S. Government to reduce foreign quotas and gradually phase-out foreign fleets. By the 1990s, there were few species with TACs that could not be fully fished by U.S. fishermen. The only significant species that was not fully utilized was Atlantic mackerel where small quantities were available for foreign fishermen. The U.S. in 1989, for example, granted a small allocation of mackerel to the Netherlands.[38] Despite these very limited opportunities in recent years, the EC has continued to renew the GIFA each time it has come up for renewal. The current GIFA is scheduled to expire on December 31, 1993.

- **Canada**: The EC reached agreement with Canada in December 1981, allowing EC vessels to fish for surplus stocks inside Canadian waters.[39] Another agreement provided access for French, German, Italian, and U.K. vessels to Canadian stocks of cod and squid in exchange for reduced tariff quotas for Canadian exports of cod, herring, lobsters, and redfish.[40] Previously some EC member states were allowed to fish in Canadian waters provided they were members of the Northwest Atlantic Fisheries Organization (NAFO).[41] Spain and Portugal had negotiated bilateral agreements with Canada which were in place by 1980, well before the two countries entered the EC in 1986.[42] The Canadians believe that they have faced years of difficulties in their relations with NAFO. The Canadians in particular accused Spanish and Portuguese fishermen of overfishing increasingly vulnerable stocks. The Canadians were especially concerned with fishing on the continental shelf where it extended beyond the country's 200-mile EEZ. The relations grew increasingly strained in the face of Canadian demands for responsible fishing because of collapsing stocks and the resultant effect on coastal communities. Canadian officials, such as Fisheries and Oceans Minister Crosbie, made increasingly emotional presentations at various international fora claiming that distantwater fishing was having a disastrous economic impact on Canada.[43] In the 1990s, the EC did take steps to halt the fishing by member countries of stocks which were recognized by all authorities as being depleted.

- **Greenland**: The EC negotiated a 10-year agreement with Greenland that went into effect on January 1, 1985, which allows EC vessels to fish in Greenland's waters. In exchange, the EC agreed to pay Greenland financial compensation. Greenland was allowed to export its fishery products to the EC free of customs duties or quantitative restrictions during the course of the agreement. EC fishermen received a quota totaling 155,000 tons of fish for harvesting in 1991.[44] Fishermen from Germany, the United Kingdom, France, and Denmark all received quotas. Included species are: redfish, cod, blue whiting, capelin, Greenland halibut, marine catfish, and deepwater shrimp.[45]

2. Northern Europe

Most EC member states had fishing agreements with bordering countries concluded before the EC assumed responsibility for fishery negotiations. Denmark, for example, had fishery agreements with Sweden, Norway, and the USSR and was a member of the Baltic Sea Fishery Commission.[46] Many of these agreements were generally taken over by the EC during the late 1970s and 1980s. Most of these agreements provided allocations in exchange for reciprocal fishing rights.

■ **Iceland**: Unlike many of the other agreements the EC inherited, the member country agreements with Iceland did not involve common marine boundaries and reciprocal fisheries. The Icelandic coastal zone does not border on EC-member states.[47] Several EC countries, especially Britain, fished extensively off Iceland, resulting in protracted confrontations. The EC did not initially negotiate fisheries agreements with Iceland, the only known agreement being with Belgium. Belgian officials reached an agreement with Icelandic authorities in 1975 (amended in 1979) which allowed them to fish 4,500 tons annually in Icelandic waters.[48] The agreement lapsed in 1985 and was not replaced. Iceland resisted fishing agreements with the EC for many years, concerned that massive EC fleets could quickly overfish their resources. In recent years, however, Icelandic fish processors have expanded their exports to the EC and have shown an interest in reducing EC import tariffs on processed, value-added Icelandic seafood products. On May 2, 1992, Iceland and the European Community signed an agreement on fisheries and the marine environment.[49] The agreement calls for annual consultations which may result in the reciprocal granting of access by each side to fishing vessels of the other party. The agreement will last for 10 years.[50] No quantities were specified in the agreement which must be negotiated each year. Although species and grounds were not identified, it is likely that the fishing grounds will be limited to the North Sea and that Iceland will receive access to EC stocks of herring, mackerel, and blue whiting in exchange for EC quotas for redfish and possibly capelin in Icelandic waters.

■ **Faroe Islands**: Under the terms on an agreement signed in June 1980, vessels from the EC were allowed access to waters off the Faroe Islands. EC vessels from France, Germany, the UK, and Denmark are permitted to catch cod, haddock, saithe, redfish, blue ling, ling, and tusk in Faroese waters. In return, Faroese fishermen are permitted to fish in EC-claimed waters.[51] The Faroese are also allowed modest tariff concessions when marketing their fishery products in the European Community. The EC and the Faroe Islands reached a new agreement on the terms of fishing in each other's waters in 1982. The terms of the new agreement allowed Faroese fishermen to catch about 21,000 tons, while the EC quota in Faroese waters was set at about 19,000 tons.[52] Additionally, Faroese fishermen were permitted to harvest 750 tons of Atlantic salmon in 1982 and 625 tons in 1983.[53] The two sides subsequently extended the agreement several times. EC fishermen in 1992, for example, were permitted to harvest 44,660 tons in Faroese waters; 25,000 tons consisted of blue whiting, 7,000 tons of redfish, 5,300 tons of mackerel, 3,600 tons of blue ling and ling, 2,500 tons of saithe, 1,000 tons of flatfish, 500 tons of cod and haddock, and 760 tons of other species. EC countries operating off the Faroes in 1992 included Belgium, Denmark, France, Germany, the Netherlands, and the United Kingdom.[54]

■ **Norway:** The EC reached an agreement with Norway in 1980, which covers fishery stocks that each party can fish. Access by all parties is allowed. The agreement has allowed mostly French, German, and British fishermen to harvest cod, haddock, saithe, redfish, blue whiting, and halibut in Norwegian waters. Norwegian fishermen, in turn, are permitted to fish for mackerel, sprat, blue whiting, and shrimp in EC waters.[55] Annual discussions have followed each year since the initial meetings were held. In 1989, the EC received an allocation of 500,000 tons in Norwegian waters in exchange for an allocation of 459,000 tons for Norwegian fishermen in the EC zone. The principal species that the EC received TACs for in the Norwegian zone for 1989 included 200,000 tons of Norway pout and sandeel, whereas the Norwegians received an allocation of 215,000 tons for blue whiting in the EC zone.[56] Norwegian authorities have recently been faced by Caribbean-flag fishing vessels operating in the "loophole" between the Norwegian and Russian EEZs. There are two areas which are not covered -- one off Svalbard and the other in the Barents Sea. In mid-1993, several Caribbean-flag vessels began fishing in the area.[57]

■ **Sweden:** The EC negotiated an agreement with Sweden which entered into force in April 1981. The agreement covers joint stocks in the Kattegat. It also covered fishing for cod, herring, and Atlantic salmon in the Baltic and North Sea.[58] The quantities provided in these reciprocal quotas are small. Annual meetings have been held for many years.

- **Finland:** The EC and Finland reached a reciprocal fisheries agreement in July 1983 which allowed EC vessels access to small quantities of Finnish salmon in the Gulf of Bothnia. The EC provided small North Sea herring allocations to Finish fishermen.[59]

- **Latvia:** The EC and Latvia reached a reciprocal fisheries agreement in Riga on July 16, 1992, which was ratified by the EC Council on March 2, 1993.[60] It provides reciprocal access to fishing grounds in the Baltic Sea and fishing quotas, and joint venture operations will be encouraged. The agreement will last for 10 years. No quantities or species were identified.

- **Lithuania:** The EC and Lithuania reached a fisheries agreement in Vilnus on July 14, 1992, providing fishing quotas and reciprocal access to fishing grounds in the Baltic Sea. Joint ventures will be encouraged. The agreement will last for 10 years. No quantities or species were identified. The EC Council ratified the agreement on March 2, 1993.[61]

- **Estonia:** The EC and Estonia reached agreement on a reciprocal fisheries agreement in Tallin on July 17, 1992. The agreement will permit an exchange of fishing quotas, provide reciprocal access into fishing grounds in the Baltic Sea, and establish joint venture operations that will last for 10 years. No quantities or species were identified. The agreement was ratified by the EC Council on March 2, 1993.[62]

- **Russia:** Negotiations between the EC and Russia have been stalled. While a number of countries believe that an agreement with Russia is necessary, others are wary of dealing with Russians, especially in view of the flood of white fish which disrupted EC markets in 1993. Thus the status of talks with Russia remains on hold.[63]

3. Mediterranean

The EC has no fisheries agreements with any Mediterranean country.[64] Spanish, French, Greek, Italian, and Portuguese fishermen, however, have fished these waters for generations. Many have established relationships with Mediterranean countries, notably **Yugoslavia**, **Libya** and **Tunisia**.[65] These relationships included joint venture operations, which were gradually ended during the 1980s.[66] The authors noted periodic press reports during the 1980s of incidents and seizures of Italian fishermen by Tunisian, Libyan or other Mediterranean countries. The EC signed an agreement providing for a special EC tariff quota for Tunisian sardines in 1984,[67] presumably part of an effort to obtain access for the Italian fishermen which operated for years off both Tunisia and Libya. The authors have no other information on EC-Tunisian or Libyan cooperation.[68]

4. Western Africa

French, Greek, Portuguese, and Spanish fishermen have fished along the coast of West Africa for many generations. Much of this activity was begun during the colonial administration and fostered after independence during the 1950s and 1960s by the contacts developed during the colonial period. It was important that these bilateral agreements be taken over by the EC because of the value or quantities of fish or shellfish being caught in the waters of former colonies. The tuna and other vessels specified in each agreement are in many cases the same vessels permitted by neighboring countries. The EC has negotiated access to several countries for the same vessels to allow them adequate access to migratory stocks. The agreements negotiated by the EC are generally for a 3-year term that can be easily renewed. Each of these agreements varies, but generally the most important element is a lump sum payment by the EC to the local government. In recent years, the coastal countries have sharply escalated the payments demanded. These agreements reached commonly include some or all of the following provisions:

- A lump sum payment each years;

- Funds for scientific and technical research programs involving local fisheries;

- Cooperation with international research programs;

- Funding for fisheries scholarships or other fisheries training;

- Employment of indigenous fishermen on EC vessels;

- Landings of a portion of the catch for local consumption or for processing at shore-based plants;

- Provisions for statistical reporting on catches;

- Limits on the number and types of vessels allowed;

- Use of local shore services;

- Licensing fees, often based on tons of fish caught, for each of the different fleets licensed to fish; and

- Creation of joint venture fisheries.

■ **Morocco:** Morocco is the single most important country to the EC. Because Spain and Morocco share a common marine boundary, both Spanish and Portuguese coastal and distant-water vessels have operated in Moroccan waters. Approximately 800 to 900 Portuguese and Spanish vessels fish off the coast of Morocco under bilateral agreements between Portugal (which expired on December 31, 1987) and Spain (which expired on January 3, 1988). Moroccan waters are important to the large number of Spanish small-boat fishermen supplying fresh fish to Spanish markets at premium prices. Under the terms of accession of Portugal and Spain to the EC on January 1, 1986, the EC assumed responsibility for renegotiating continued access for member-country vessels to Morocco's waters. This meant that a very large number of fishermen in both countries were desperate for the EC to negotiate continued access for them. The EC and Morocco concluded a 4-year fisheries agreement on May 26, 1988. The agreement allowed a fleet of 800 to 900 EC vessels (capacity totaling 100,000 tons) to fish in Morocco's 200-mile EEZ in exchange for a payment of $395 million.[69] The treaty was renegotiated on May 15, 1992. Morocco demanded a much larger cash payment and the EC agreed to a financial package of $660 million, almost as much as Morocco previously demanded for the entire 1988-92 period.[70] The EC received permits for 600 vessels (mostly small coastal vessels), but 140 licenses were issued to Spanish high-seas vessels and 3 were issued to Greek high-seas vessels. Licenses were also issued for 20 tuna vessels in the agreement. Other provisions included a mid-term review in 1994, the ability to suspend licenses of violators, and the continuation of preferential marketing of Moroccan canned fish (unlimited quantities will be allowed to enter the EC duty-free after 1996). EC credits for scientific research and training were also provided. Morocco received the right to station as many as 300 fishery observers aboard EC vessels. Finally, the EC agreed to a 2-month annual fishing ban on coastal and high-seas fishing to allow stocks time to spawn.[71]

■ **Mauritania:** Mauritania has virtually no domestic fishing industry. Almost all of the fisheries catch has been taken by foreign fishermen. Quite a number of Asian and European countries as well as the Soviet Union conducted fisheries off Mauritania.[72] Greek fishermen were fishing off the coast of Mauritania, about 3 years before they joined the EC.[73] Spanish and French fishermen were also interested in this region. The EC and Mauritania began negotiations on a fisheries agreement in 1978 and reached a tentative agreement in 1979.[74] Efforts to negotiate a longer-term agreement, however, were stalled for nearly 5 years over the issue of financial compensation.[75] Agreement on the terms of a long-term accord was finally reached on May 14, 1987. Mauritania agreed to allow 41 tuna vessels, mostly French tuna vessels based in Dakar, Senegal, and Spanish vessels based in the Canary Islands, to fish in their waters.[76] The EC and Mauritania approved a new protocol on April 18, 1991, which will remain in force until July 31, 1993. The protocol permits 38 EC pole-and-line vessels and surface longliners and 25 tuna seiners to continue fishing tuna. It also allows trawlers to fish 15,000 tons of black hake per month and 10,000 tons of crustaceans per month (average monthly harvest).[77]

■ **Senegal:** The EC-Senegal fisheries agreement signed in June 1979, was the first fisheries agreement between the EC and a developing nation. It covered fishing rights for a number of small French trawlers, several tuna vessels, and some Italian freezer trawlers. The agreement included EC financial assistance to Senegal. A new protocol was signed on January 12, 1984.[78] Short-term extensions of the agreement were reached in 1986 to allow negotiations to continue in the absence of a long-term accord. Senegalese demands for increased EC payments resulted in the delays, but agreement was finally reached in 1987. The final agreement, which ran from October 1, 1986, until February 28, 1988, included significantly higher EC payments to Senegal. The agreement also included provisions for EC vessels to land some of their catch in Senegal for processing.[79] This agreement was followed by an exchange of letters extending the agreement until February 28, 1990.[80] An additional exchange of letters extended the agreement until April 30, 1992.[81] The continued agreement permits EC vessels to fish for tuna, cephalopods, and shrimp in Senegalese waters. A percentage of the catch must be landed in Senegalese waters. An $36 million payment was to be made to Senegal in two equal annual installments.[82] An extension to the agreement with Senegal was accepted by the EC Commission on July 22, 1993, retroactive to October 2, 1992, and will run through October 1, 1994. The latest agreement permits 79 tuna vessels and trawlers amounting to 31,000-GRT to operate in Senegalese waters in exchange for an EC payment of $39 million.[83]

■ **Gambia, The**: The EC first began discussions with officials in The Gambia in 1984.[84] Negotiations, however, remained stalled until agreement was finally reached in 1987.[85] The agreement included provisions for tuna seiners and tuna pole-and-line vessels, fresh fish trawlers, and shrimp trawlers to operate in The Gambia's waters in exchange for EC compensation in the amount of about $3 million.[86] The EC-Gambia fisheries agreement was extended for 3 years effective July 1, 1990. Fishing rights were given for 40 EC tuna purse seiners, 17 pole-and-line vessels, and 8 longliners. Licenses were also granted to fresh fish trawlers and to shrimp trawlers. Financial compensation in the amount of $4.7 million was provided in exchange for fishing access.[87] The EC originally reported to its member states that it did not intend to renew the EC-Gambia accord when it expired on June 30, 1993, explaining that few member states took advantage of the agreement.[88] Spain and Greece objected and the agreement will be extended, although for fewer licenses and at a lower rate of compensation.[89] The U.S. Embassy in Banjul notes that 434 licenses were issued by The Gambia to EC vessels between 1985 and 1992. The EC countries receiving licenses to fish in The Gambia's waters included: Belgium (2), France (99), Greece (83), Italy (3), Portugal (8), Spain (237), and the United Kingdom (2).[90]

■ **Guinea (Bissau):** The second international fishery agreement signed by the EC with a developing country was with Guinea (Bissau). The agreement was negotiated in July 1979, and was signed on February 27, 1980. The 2-year agreement allows 20 EC vessels (mostly French and Italian vessels) to fish in Guinea's waters in exchange for a payment of $300 per gross registered ton.[91] The agreement was extended on March 15, 1983, for a 3-year period. The new agreement provides for an annual payment of ECU 1.4 million.[92] The agreement was extended for another 3 years in 1986.[93] The renewal permitted 45 tuna seiners, 25 pole-and-line vessels, and 6 longliners to operate in local waters. An exchange of letters with Guinean officials extended the agreement for an additional 2 years, or through 1991.[94] This agreement also permitted shrimp trawlers to fish in Guinean waters. A 2-year agreement allowed EC fishermen to continue to fish in Guinea Bissau's waters in exchange for $16 million in grants and other payments.[95] The agreement, from January 1, 1990, to December 31, 1991, permitted fishing for shrimp, and cephalopods, and reduced the number of EC tuna vessels operating in Guinean waters.[96] Another extension of the agreement, from June 16, 1991, to June 15, 1993, was announced in Brussels on October 7, 1991.[97] An additional 2-year extension was announced in 1993 that was valid through 1995.[98]

■ **Guinea (Conakry):** The EC negotiated a 3-year agreement in 1980. The agreement included financial compensation and included EC grants for studies, training, and scientific research in exchange for fishing rights for EC vessels.[99] The EC agreed to make payments worth $9 million in exchange for access.

■ **Cape Verde:** The EC signed a 3-year agreement with Cape Verde in 1990, allowing 21 tuna seiners and 24 pole-and-line tuna vessels to fish in Cape Verdian waters.[100] Provisions were also made for the operation of two bottom longliners and two experimental cephalopod fishing vessels to operate in Cape Verde's waters. The EC agreed to pay $3 million for access rights.

■ **Sierra Leone**: The first discussions of a possible fishery agreement between Sierra Leone and the EC came during a visit by Sierra Leone's President, Siaka Stevens, to Belgium in 1979.[101] However, the authors have no record of an agreement until April 25, 1990, when a 2-year agreement was initialled allowing licenses to be issued for 46 tuna seiners, 43 pole-and-line vessels, and an unspecified number of trawlers fishing for crustaceans, cephalopods, and finfish, as well as demersal longliners, in exchange for payments of $6 million in two annual installments.[102]

■ **Ivory Coast:** The Ivory Coast is important to EC fishery interests. Several EC tuna seiners operate out of Abidjan and substantial quantities of tuna are landed there for processing by canneries operated by EC interests. The EC and the Ivory Coast reached a fisheries agreement in August 1990, which permitted 54 tuna seiners and 35 pole-and-line or longliners as well as an unspecified number of freezer-trawlers to fish in Ivorian waters. The EC and the Ivory Coast extended the agreement until January 1994. The EC agreed to pay $35.8 million for the right to fish, including payments for scientific research, stock studies, training of fishermen, and other studies.[103] The agreement allows 89 tuna vessels to fish in Ivorian waters.

■ **São Tome and Principe:** EC and São Tome officials initialed a 3-year fisheries agreement on September 1, 1983, allowing 27 French tuna vessels permission to fish in their waters. The EC agreed to pay for access to these waters.[104] The agreement was extended on December 3, 1986. The EC-São Tome agreement was again extended, from June 1, 1990, to May 31, 1993, in an exchange of letters which permitted 46 tuna seiners and 5 pole-and-line tuna vessels to fish in São Tome waters. The EC pledged $2.1 million in compensation in exchange for fishing rights for 40 tuna seiners and 8 pole-and-line tuna vessels.[105] The agreement was extended until May 31, 1996.[106]

■ **Equatorial Guinea:** EC and Equatorial Guinean officials initialed a 3-year agreement on June 27, 1983. The agreement allowed 27 EC vessels (mostly French and Italian) to fish for tuna in exchange for financial assistance to develop the nation's fisheries.[107] This agreement was extended on June 25, 1963, for an additional 3 years. The new accord allowed EC vessels to fish for shrimp as well as tuna. A total of 48 tuna vessels and 11 pole-and-line tuna vessels were allowed to operate.[108] A third renewal, covering the period between June 27, 1989, and June 28, 1992, was signed on June 2, 1989. The agreement permits 40 tuna purse seiners and 30 longliners to operate, and shrimping continued under the renewed accord.[109] This agreement was also extended until June 1992. The latest agreement allows 80 tuna vessels to operate along with stern trawlers in exchange for $7.9 million in EC payments.

■ **Gabon:** The EC and Gabon initialed a fisheries agreement on February 26, 1988, in Libreville. The 3-year agreement takes effect on April 15, 1988, and provides for 54 tuna seiners and 12 longliners. The agreement also provides 15,000 tons for EC freezer trawlers. The EC agreed to payments of $11 million in compensation for access to Gabon's waters.[110]

5. Southern Africa

■ **Angola:** Angola has a much larger coastline than the West African countries and very significant fishery resources. Before independence, the Portuguese, including Portuguese residents in Angola, conducted a major fishery in Angola. As a result of the civil war in Angola the fishing industry has declined disastrously. The EC concluded an 2-year agreement with Angola permitting EC fishing on May 3, 1987. The agreement replaces a bilateral agreement between Spain and Angola. The agreement provides for 25 tuna seiners and for an unspecified number of shrimp trawlers to harvest 10,000 tons of fish and shrimp in Angolan waters in exchange for $25 million.[111] The two sides subsequently extended the agreement from May 3, 1989, to May 2, 1990, in an exchange of letters.[112] The extended agreement allowed EC vessels to catch 5,000 tons of shrimp a year and to harvest tuna using 28 vessels. An additional 3 trawlers and 2 longliners were to fish on an experimental basis.[113] The agreement was extended on May 3, 1990, to May 2, 1992. The new agreement provided access for 24 shrimp trawlers, 28 tuna freezing vessels, and 5 tuna seiners. The EC agreed to pay $20 million to Angola for these fishing rights.[114]

■ **Namibia**: Namibia is one of the key countries for EC fishery interests. Spanish vessels began fishing off the coast of Namibia in 1962, when Pescanova's *Andrade* was first deployed. Many other foreign-flag vessels enter the important groundfish fishery off the Namibian coast. South Africa administered Namibia under a United Nations mandate, but the U.N. terminated that mandate in 1966. While South Africa continued to administer Namibia, it declined to extend a 200-mile zone for Namibia when it declared a 200-mile zone for South Africa proper.[115] According to Namibian Fisheries Permanent

Secretary Calle Schlettwein, there were some 300 foreign boats working Namibian waters before independence. This included approximately 202 Spanish and 12 Portuguese vessels.[116] The EC vessels reportedly harvested 260,000 tons of hake with a value of over $86 million.[117] Namibia gained its independence on March 21, 1990, and immediately acted to exclude all foreign fishing off its coast. This action was designed to give heavily fished stocks a chance to recover and allowed local authorities time to install their own programs and goals. Namibian authorities began to patrol their waters aggressively for violators.[118] This included the large Spanish fleet of more than 200 trawlers. Unfortunately, some Spanish vessel owners continued to fish illegally in Namibian waters. This led to confrontations with Namibia and five Spanish vessels were seized (the average value of each vessel was $11 million).[119] The captains were ordered to pay $71,000 each in fines or were ordered to serve 2 years in prison. Eight remaining officers were sentenced to pay $7,100 or spend 6 months in jail. Pending negotiations with the EC broke off in the face of continued illegal fishing. The situation in 1993 has changed: stocks have had a substantial period of time to slowly recover and illegal fishing had virtually ceased.[120] Local press reports suggested that the Namibian fishing industry is having a "hard time" maintaining access to its European markets.[121] Part of the problem can be attributed to the flood of Russian-caught groundfish being landed in France; the flood of cheap imports led to rioting by French fishermen. The EC responded by imposing minimum import prices on many groundfish, including hake. This has impacted the Namibian fishing industry and threatens to delay the development of Namibia's fisheries.[122] Namibian canned pilchards have begun to reappear in UK supermarkets and canned tuna production is projected to increased from 200,000 cases to one million cases in 1994.[123] It has been reported that Namibia's fishing quota has risen from 80,000 tons in 1992 to 115,000 tons in 1993.[124]

■ **Republic of South Africa**: There are no direct fishery agreements between the EC and the Republic of South Africa. However, the EC has allowed member states to continue previously negotiated bilateral fishery agreements with the Republic of South Africa.[125] Portugal, for example, finalized bilateral fishery agreements with South Africa on April 8, 1979, and Spain signed a similar fisheries agreement with South Africa on March 8, 1982. Both agreements were initially valid for 10 years and have since been extended. The latest extention came in 1993 when the EC permitted both Portugal and Spain to extend their agreements with the Republic of South Africa until March 7, 1994.[126] The authors have few details on European operations in South Africa. Three companies, probably EC-based, operate high-seas vessels from South African ports which are registered in the Cayman Islands.[127]

6. East Africa

■ **Mozambique**: The EC signed a protocol on fisheries in Maputo on March 18-21, 1983; the agreement included an EC pledge to contribute $3 million in aid towards an artisanal fisheries project.[128] The EC and Mozambique , signed a 3-year fisheries agreement in 1986, effective January 1, 1987, which permitted 40 tuna vessels to fish Mozambican waters. The agreement also permitted EC shrimp vessels to operate off Mozambique. The EC agreed to pay about $9.6 million for this access. The agreement included EC assistance for fisheries research.[129] An exchange of letters between the EC and Mozambique subsequently extended the agreement from January 1, 1990, until December 31, 1991.[130] The exchange of letters allowed for continued shrimp fishing and for licenses to be issued for 44 tuna vessels in exchange for EC payments of $7.5 million.[131]

■ **Madagascar:** The EC and Madagascar reached an agreement on fisheries in December 1984,[132] but the agreement was not signed until January 28, 1986. The agreement allowed 33 tuna vessels to fish off Madagascar for a 3-year period.[133] The agreement was particularly important to French tuna and shrimp fishermen. The agreement was amended on November 12, 1987, and extended from May 21, 1989, to May 20, 1992. The agreement initialed in 1989 allowed the EC to increase the number of tuna licenses from 40 to 45 vessels. An experimental shrimp fishing operation was authorized.[134] The agreement has since been renewed and will run through May 1995. The new agreement permits 50 tuna vessels to fish off Madagascar in exchange for $2 million in EC payments.[135]

- **Tanzania:** The EC signed its first fisheries agreement with Tanzania on December 19, 1990. The agreement apparently permits fishing for tuna and shrimp in Tanzania's waters, but few details are available to the authors.[136] The EC agreed to pay $678,000 for fishing rights.

7. Indian Ocean

The primary EC interest in the Indian Ocean is tuna. The EC has successfully negotiated a series of agreements which provided access for EC tuna seiners to important Indian Ocean resources in exchange for fee payments and market access for the countries involved. In addition, several of the agreements described above under "East Africa" also provide the EC access to Indian Ocean tuna grounds.

- **Comoro Islands:** The EC and the Comoro Islands signed a fisheries agreement in Brussels on August 23, 1988. The 3-year agreement allows EC fishermen aboard as many as 40 tuna vessels to catch 6,000 tons of tuna annually in Comoro's waters in exchange for financial compensation from the EC.[137] The agreement was extended from July 20, 1991, to July 19, 1994, in an exchange of letters.[138] The EC agreed to pay $1.7 million for the right to fish in the Comoros' fishing zone.

- **Mauritius:** The EC and Mauritius signed a fisheries trade agreement in 1984 allowing canned tuna packed in Mauritius, but imported in raw form from other countries, to be considered as originating in Mauritius. The agreement allowed Mauritius to develop its tuna fishing industry and to continue exporting canned tuna to the European Community under favorable terms. This agreement was extended on July 16, 1985, June 5, 1989, and June 20, 1990.[139] The EC and Mauritius agreed to a fisheries access agreement in 1988, which allowed 40 tuna seiners, and an unspecified number of longliners and/or trawlers to fish in Mauritian waters. EC financial assistance was provided in exchange for fishing rights.[140] The EC agreed to pay $2 million to Mauritius for access to their fishing grounds in the latest agreement.

- **Seychelles:** The EC and Seychelles officials signed a 3-year agreement on January 18, 1984, which allowed 18 EC tuna purse seiners to fish in waters around the Seychelles. In exchange, the EC agreed to fees for the right to fish.[141] This agreement has since been extended and the Seychelles is an important base for French and Spanish tuna fishing fleets. The agreement was extended over the years. An accord reached in 1990, extended the Agreement until January 1993 and allowed 40 high-seas tuna seiners to fish off the Seychelles in exchange for compensation amounting to $11.6 million.[142] This agreement was extended until January 17, 1996. The agreement continued to allow 40 tuna seiners to fish off the Seychelles, but the financial compensation package was reduced to $10.8 million.[143]

8. Latin America

European countries have deployed few vessels off Latin America. While several countries have expressed an interest beginning in the 1960s, the greater distances involved, early introduction of 200-mile zones, highly nationalistic policies, restrictive laws, and a greater enforcement capability combined to limit deployment. German and Spanish fishermen deployed a few trawlers off Argentina (joint ventures) and Chile (licenses). The Spanish deployed a few tuna seiners off Ecuador (joint ventures/association contracts) during the 1970s and 1980s. The French deployed a few shrimp trawlers off French Guiana, which is administered as an overseas French Department. The British decision to declare a 150-mile zone around the Falklands and issue fishing licenses provided opportunities for some EC countries (especially Spain) to fish in the Southwestern Atlantic, but most of the licenses were issued to Eastern European and Asian countries.

- **Argentina**: Argentina declared a 200-mile zone in 1967, primarily as a result of expanding Soviet fisheries in the southwest Atlantic. Several European countries subsequently expressed interest in fishing off Argentina, but Argentine policies were highly restrictive. The authors believe that a small number of European vessels may have obtained access through joint-venture arrangements, but details are not available to confirm this. After the 1982 Falklands conflict with the British, the Argentines tried to negotiate fishery agreements with distant-water fishing countries. The Argentine diplomatic effort was aimed at discouraging the distant-water countries from purchasing British Falkland licenses and thus providing *defacto* recognition of British jurisdiction. The arrangements offered by the

Argentines, however, continued to be so restrictive that none of the distant-water countries with market economies acceded to the Argentine conditions. Argentina did finally sign agreements with the Soviet Union and Bulgaria in 1986.[144] While the Bulgarian agreement proved to be short-lived, the Soviet agreement endured. As a result, Soviet fishing in the southwest Atlantic increased from less than 80,000 tons in 1986 to nearly 169,000 t in 1987 and 242,000-282,000 t annually during 1988-90. Not all of this catch was harvested within the Argentine 200-mile zone, but the authors believe a substantial quantity was.

- **Falkland Islands**: Little European fishing was conducted around the Falkland Islands during the 1960s and 1970s. The British made no attempt to extend their coastal zones and fisheries enforcement in the southeast Atlantic was conducted primarily by the Argentines. This situation changed radically after the Falklands conflict in 1982. The British implemented a 150-mile Falkland Islands Protection Zone (FIPZ) around the Falklands, primarily to exclude Argentine naval vessels. As a result, distant-water fishermen began to fish off the Falklands. This increased effort was initiated by Polish, Japanese, and Soviet fishermen, but the Republic of Korea has since become a major participant. The distant-water effort expanded so sharply that the British Government became increasingly concerned about squid and other stocks. The British Falkland Islands Government implemented a 150-mile Falklands Interim Conservation and Management Zone (FICMZ) in 1987 and began issuing fishing licenses. Spain and other European countries also initiated fisheries. The Spanish fishery is the largest, totaling 59,000 - 85,000 tons annually between 1986-90, mostly squid. Other participating Western European countries include Greece, Italy, the Netherlands, Portugal, and the United Kingdom (See appendix 29-31).[145]

- **Chile:** Spain and Chile signed a fisheries access agreement in 1977, but the authors do not know of any significant Spanish fishing conducted under the agreement. Some fishing was conducted by Spanish vessels, through various joint venture arrangements, off southern Chile. Few details on these operations, however, are available. A Chilean publication in 1980 reported on the foreign vessels operated in Chile, several of which appeared to be Chilean.[146] One Spanish publication referred to Spanish operations in 1983, but the authors have no more recent written reports.[147] The authors believe that about 50,000 t of fish were taken by foreign vessels off Chile in 1991, but most of it by a Japanese joint venture.[148] Spanish longliners apparently conduct some operations in the southeast Pacific for swordfish and other species that they are not reporting. Spanish fishery trade associations have recently complained to Spanish and Chilean Government officials concerning Chile's refusal to allow the Spanish vessels to transship their catch in Chilean ports.[149]

- **Peru:** The authors know of no fishing by EC-member countries in Peruvian waters, although there have been a variety of fishery contacts.[150]

- **Ecuador:** Press reports in the 1970s indicated that Ecuador granted Spain a fisheries allocation of 60,000 tons,[151] but the authors have no information confirming that Spanish fishermen actually initiated fishing operations off Ecuador. Various reports indicate that a small number of Spanish tuna seiners operated in the Eastern Pacific during the 1970s and 1980s.[152] Several of these vessels operated under joint-venture arrangements or special "association" contracts provided for under Ecuadorean legislation.[153] The major Spanish-Ecuadorean tuna joint venture was Conservas Isabella. Several Ecuadorean companies, such as INEPACA, a U.S. joint venture, contracted with Spanish seiners to fish.[154] The Spanish operated with Ecuadorean canners, landing at least part of their catch in Ecuador. The authors, however, have no details on these arrangements. The Inter-American Tropical Tuna Commission reported that the *Monteclaro,* a Spanish-flag purse-seiner, sank in the Eastern Tropical Pacific on July 14, 1993.[155]

- **French Guiana**: French Guiana offers some limited opportunities for French fishermen as the small local population conducts only limited fisheries. The major resource, shrimp, during the 1970s was harvested primarily by U.S., Japanese, and other foreign fishermen. French and EC authorities during the 1980s gradually reduced foreign licenses and imposed other restrictions on foreign companies as French companies expanded shrimping operations.[156]

- **Martinique:** Martinique and Guadeloupe fishermen so intensively fished the limited local grounds that no opportunities were available for French fishermen.

- **Guadeloupe:** Guadeloupe fishermen so intensively fished the limited local grounds that no opportunities were available for French fishermen.

- **Dominica:** EC fishermen registered in the French Overseas Departments of Guadeloupe and Martinique will be issued 220 licenses allowing them to fish in waters belonging to Dominica. The EC will be limited to using vessels under 40 feet in length (e.g., small artisanal craft). EC payments to the Government of Dominica will total in the neighborhood of $2.5 million. Dominica is a small Caribbean island located between Martinique and Guadeloupe. The EC also agreed to make approximately $180,000 available for fisheries training.[157]

V. FUTURE DIRECTIONS, 1993-96

EC officials would like to deploy substantial numbers of vessels on distant-water grounds. There appears little likelihood that current arrangements with North American, European, African, and Indian Ocean countries can be significantly expanded. EC officials are hopeful that initiatives with Latin American countries and Nambia will permit the deployment of a significant number of vessels. There is also some possibility of future deployment of some vessels in the Pacific.

A. LATIN AMERICA

The only real success of the EC Latin American effort to date has been with **Argentina**. The EC signed a bilateral access agreement with Argentina in December 1992, which will provide access for 70 EC vessels to harvest 250,000 tons of fish in Argentina's waters for the next 5 years.[158] The agreement, which has been been ratified by the EC[159], does not involve any payments for access, a feature that marks many of the agreements the EC has made with African countries.[160] Instead, the agreement will include the establishment of many joint venture operations between EC and Argentinean business firms. A total of 35 full-time licenses will be issued, allowing 70 vessels access to Argentina's waters. One-third of the vessels will fly the EC flag (or national flags) and two-thirds will become Argentine vessels after three years and will fly the Argentina flag.[161] The agreement may be automatically extended for an additional 2 years if there are no formal objections to the continuation of the agreement.[162] One of the first ships to go will be the *Mar de Vigo*, the one-time flag ship of the Spanish freezer fleet based at the port of Vigo in northern Spain. The ship has been idle for several years but is being overhauled and readied for the EC-Argentina fishing program later in 1993.[163]

The EC Fisheries Council in 1990 mandated that the EC Commission pursue access arrangements with other Latin American countries: **Chile, Columbia, Mexico, Peru, Uruguay** and **Venezuela**. The EC has several fisheries assistance projects in South America, especially focusing on the Andean countries. The EC, in November 1990, expanded its fisheries assistance programs to Central America and granted $16 million to develop fisheries in **Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua**, and **Panama**.[164] The EC Central American program was designed to study fishery resources, improve fisheries management, train artisanal fishermen, support aquaculture, and provide new fish harvesting and processing techniques for local shrimp fisheries. This is a pattern followed by the EC in other regions and suggests that the EC is carefully studying Latin America for possible future agreements. Exploratory talks have been held with Argentina, Colombia, Mexico, and Venezuela.[165]

EC officials have met with fishery officials in several Latin American countries. The countries involved appear to have shown little interest in the EC proposals. The only successful result has been the 1992 bilateral agreement signed with Argentina. EC officials are hopeful that the successful conclusion of the agreement with Argentina will encourage other Latin American countries to negotiate similar agreements.[166] The Argentine success, however, may be due to a unique set of circumstances related to the British-Argentine dispute over the Falkland Islands.[167] As a result, the EC may have difficulty reaching similar accords elsewhere in Latin America. Any agreements reached with other countries would almost certainly be on a much smaller scale than the Argentine agreement. Other Latin American countries do not have large underutilized stocks of interest to EC fishermen. The largest underutilized stock is currently jack mackerel off Chile and Peru. Both Chile and Peru are currently expanding their fleets to be able fish jack mackerel in their own waters. Substantial quantities could be fished outside

200-mile zones as the Soviets and other countries did for years.[168] Such operations, however, involve increasing international complications.[169] In addition, the low value of the species would probably not support EC distant-water operations.

B. SOUTHERN AFRICA

EC officials are particularly interested in regaining access to the important Southern African trawl fishing grounds off **Namibia**. Renewing negotiations with Namibia is a high priority for the EC. More than 200 Spanish trawlers were formerly deployed in the Cape hake fishery. Even if the EC is only able to gain access for *some* of those vessels, it would be an important accomplishment for the depressed Spanish fleet.[170] The authors believe it is unlikely they will get permission for all of these vessels to reenter the fishery. Namibian officials appear, however, to have been reluctant to allow foreign vessels to return to its EEZ. EC officials believe that the exclusion of foreign fishing off the Namibian coast for 2 years has given stocks time to regenerate.[171] There appear to be many positive reasons that would make it advantageous for the Namibian Government to negotiate an accord with the EC. Not only would licenses generate income, but the EC would also probably offer development assistance or joint venture arrangements to help Namibia develop its own domestic fleet. The EC, especially Spain, offers a multi-million dollar market for Cape hake products that would be an important export market for Namibian fishermen. Thus, it would appear that both sides have important reasons to resume serious negotiations.

C. HIGH-SEAS

EC factoryships flying the German and Dutch flags have been built specifically to fish for pelagic species on the high-seas. These vessels have fished off **Norway, Scotland**, the **Falkland Islands,** and off **Morocco**. These vessels will fish anywhere they can find fish to catch and harvest. The fleet includes the German-flag vessels *Jan Maria*, the *Dirk Dirk*, and the *Gerda Maria* (owned by Doggerbank Seefischerei, a wholly-owned subsidiary of the Parlevliet & van der Plas BV of Holland), and the Dutch-flag vessel *Dirk Diederik* (owned by Parlevliet & van der Plas BV of Holland). The Dutch vessels *Cornelis Vrolijk Fzn*, *Franziska*, and the *Zeeland* have also fished on the high-seas and are expected to do so in the future.[172] Two Irish vessels, the *Veronica* and the *Atlantean II*. also have the capability of fishing anywhere in the world, but these vessels have remained inside Irish waters or in the North Sea since they were delivered. Obviously there are other vessels in the EC fleet which could fish on the high-seas. However, the 8-10 vessels identified above, were built specifically to fish for pelagic species on the high-seas. Most other EC vessels normally would fish inside a nation's 200 mile limit as part of an EC bilateral fisheries agreement.

D. PACIFIC OCEAN

EC fishermen are unlikely to initiate major distant-water fisheries in the Pacific during the 1990s. The costly logistics and elevated operating expenses probably preclude such initiatives. Major Pacific fishing grounds are already heavily fished by coastal countries and important Asian distant-water countries. There is, however, the possibility that EC tuna fishermen (French and Spanish) may deploy some vessels in the Pacific. As long as tuna fishing off the western coast of Africa and in the Indian Ocean remains steady, it is unlikely that the EC fishermen will be forced to move into the Pacific Ocean. However, it is only prudent to assume that French and Spanish tuna fisheries may eventually face declining catches and that there will be pressure to move into the Pacific Ocean. Most of the EC high-seas purse seiners range between 1,000-GRT and 1,600-GRT.[173] The fleet includes about 20 French vessels and a similar number of Spanish vessels.[174] These vessels are reasonably new (mostly built after 1975) and new vessels being added to the fleet are larger and more sophisticated. Some observers believe that the EC fishermen will eventually find it difficult to maintain profitable fishing in the Indian Ocean in the face of growing competition; this could lead them to seek new opportunities in the Pacific Ocean, although there is no indication that this is currently being planned. It should be noted, however, that one Spanish purse seiner, the *Monteclaro*, sank in the Eastern tropical Pacific on July 14, 1993.[175] **France**: French fishermen currently appear to have access to adequate grounds. The French catch of tropical tuna has gone from 120,000 tons in 1989 to 130,000 tons in 1990 to 150,000 tons in 1991.[176] French fishermen would have some advantage in Western Pacific operations as they would have access to the waters off French Polynesia and other French Pacific territories. In addition the French claim to Clipperton Island also gives them a claim to Eastern Pacific grounds. **Spain**: Spanish fishermen also appear to have access to adequate grounds. The Spanish catch of tuna in the Indian Ocean increased from 22,900 tons in 1984 to 38,500 tons in 1985 to 43,200 tons in 1986 to 57,700 tons in 1987 to 114,000 tons in 1988 to 125,000 tons in 1989.[177] A small number of Spanish seiners operated in the eastern Pacific during the 1980s and early 1990s, including one purse seiner, the *Monteclaro*, which sank in the area on July 14, 1993.[178] Several of these vessels operated under joint venture contracts with coastal countries, especially Ecuador. **Cyprus:** One tuna purse seiner, the *Isabel Tuna*, fishes for tuna in the Eastern tropical Pacific. The vessel was formerly a Spanish vessel. It registered with the Inter-American Tropical Tuna Commission (IATTC) in 1991.

E. REFLAGGING

The authors have found several examples of West Europeans involved in reflagging. There are, for example, 8 vessels of unknown origin reflagged in **Honduras** with names such as *Ekawat Reefer 2, Focus, Focus No. 101, Glory, La Paloma, Oriente No. 7, Pilgrim,* and *Polestar*. The *La Paloma* is a 4,358-GRT vessel and is registered as belonging to Fortuna Unity Co. Ltd. The *Glory* is a 2,677-GRT vessel registered as belonging to Greenbury Trading Ltd. Three companies operate high-seas vessels out of ports in South Africa, although the vessels are registered in the **Cayman Islands**.[179]

In 1993, 18 ex-Spanish vessels, 6-ex-French, 3 ex-Dutch, and 1 ex-UK vessels were reflagged under **Panamanian** registry. In 1993, 31 reflagged vessels were flying the flag of **Cyprus**, as compared to 3 vessels in 1992 and 1 vessel in 1991. Most of these vessels were Russian or Polish, with several from the Netherlands, Norway, Spain, and France (see Cyprus, table 3). In 1993, **Malta's** registry included 33 reflagged vessels in its fleet, including 7 vessels over 500-GRT.

In August 1993, the Norwegian Ministry of Fisheries reported that they had expelled two Caribbean-registered fishing vessels from an international area near the Svalbard. The area, called the "loophole," is in international waters between the Norwegian and Russian EEZs around the Svalbard. Another "loophole" exists in the Barents Sea between the Russian and the Norwegian EEZ. After being expelled from the Svalbard, the vessels moved to the Barents Sea loophole where they were joined by 4 additional vessels. The 6 vessels were identified as registered in **Belize,** the **Dominican Republic**, and **St. Vincent**. The vessels were unloading their catches in Icelandic ports.[180]

SOURCES

Chile Pesquero, various issues.

Council of the European Communities, General Secretariat, *Press Release*, Brussels, March 15, 1983.

Court of Auditors Special Report no. 3/93 - *The implementation of the measures for the restructuring, modernisation and adaption of the capacities of fishing fleets in the Community* as reported in "Report highlights limited success of 1987-90 EC fleet restructuring grants," *Eurofish Report,* June 17, 1993.

Crosby, John. Minister of Fisheries and Oceans, Canadian oral intervention, Responsible Fisheries Conference, Cancun, Mexico, May 7, 1992.

De Pasquale, P. *REPORT: on fisheries agreements between the Community and third countries*, drawn up on behalf of the Committee on Agriculture, Fisheries and Food, European Parliament, Working Documents, English Edition, WB(VS1)4505E, Document A-160/86, November 26, 1986.

Eurofish Report, various issues.

European Community, various *Council Directives.*

Fishing News International, various issues.

Folsom, William B. "Morocco-EC Fisheries Agreement," *International Fisheries Report* (IFR-88/71), National Marine Fisheries Service, NOAA, U.S. Department of Commerce, July

29, 1988.

Folsom, William B. and Dennis M. Weidner, "Fisheries of Mauritania, 1974, *Foreign Fisheries Leaflet, No. 76-3,* Office of International Fisheries, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., October 1976

Hinton, Michael. "Estimated Catch and Fleet Information for the Eastern Pacific Ocean Tuna Fleet," *Inter-American Tropical Tuna Commission*, Report No. 93-23, January 1-July 19, 1993.

Industrias Pesqueras, various issues.

International Trade Commission, "Tuna: Competitive conditions affecting the U.S. and European tuna industries in domestic and foreign markets," Report to the Committee on Finance, U.S. Senate, and the Committee on Ways and Means, U.S. House of Representatives, Investigation No. 332-291, Under Section 332 of the Tariff Act of 1930, USITC Publication 2339, Washington, D.C., December 1990.

Jacobson, Don and Dennis Weidner, "Soviet-Latin American Fishery Relations, 1961-89," *International Fishery Reports* (IFR-89/39), Office of International Fisheries, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., May 5, 1989

La Pêche Maritime, various issues.

OECD, *Review of Fisheries, 1978*, Organization for Economic Co-Operation and Development, Paris, 1979

OECD, *Review of Fisheries, 1980*, Organization for Economic Co-Operation and Development, Paris, 1981

Office of Naval Intelligence, U.S. Navy.

Official Journal of the European Communities, various issues.

Quintanilla, Francisco and Dennis Weidner, "Peruvian bilateral fishery relations," International Fishery Report (IFR-88/88), Office of International Fisheries, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., September 2, 1988.

Quota Regulations in Norwegian Fisheries Zones, The Royal Norwegian Ministry of Fisheries, Oslo, August 25, 1989.

Report 1991 from the Commission to the Council and the European Parliament on the Common Fisheries Policy, Commission of the European Communities, SEC(91) 2288, Brussels, December 18, 1991.

Seafood News, various issues.

Servicio Nacional de Pesca, *Anuario Estadistico de Pesca*, 1991, Chile.

The European Community's Fishery Policy, Office for Official Publications of the European Communities, Periodical 1/1985, Luxembourg,1985.

Thomas, Tracy. "Cuban Fishery Relations in the Americas, 1959-88," *International Fishery Reports* (IFR-88/59), Office of International Fisheries, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., June 29, 1988

U.S. Department of Commerce, *Fisheries of the United States, 1990*, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., May 1991

U.S. Diplomatic posts, various reports.

Wade, Nick. "Barents Sea 'Hole' Dispute," *Fishing News International*, September 1993, p.1-2.

West Africa, "Siaka reports on EEC visit, October 15, 1979.

World Fishing, various issues.

Zarate, Carlos. INEPACA, personal communications with Dennis Weidner, December 11, 1979

ENDNOTES

1. The European Community (EC) was established on April 8, 1965 and became operational on July 1, 1967. The EC currently has 12 member states: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, and the United Kingdom. Only Luxembourg does not have access to a coastal area and thus does not engage in marine fishing. The European Community is also identified as the European Economic Community (EEC); it is identified as EC in this report.

2. Vessels over 500-GRT. EC member states also deploy many high-seas, or distant-water, vessels under 500-GRT.

3. The Treaty of Rome of 1958 established the European Economic Community.

4. Council Directive of 4 October 1983 concerning certain measures to adjust capacity in the fisheries sector (83/515/EEC), *Official Journal of the European Communities*, No. L. 290/15, October 22, 1983.

5. This was announced in Council Directive 83/515/EEC of October 1983 and later amended by Regulation (EEC) No 4028/86.

6. The early programs were designed to remove old, uneconomic vessels and to replace them with more modern, efficient vessels. The European Agricultural Guidance and Guarantee Fund (EAGGF), for example, was instrumental in reducing the size of the inshore fishing industry as part of a program to modernize the fishing industry. *Information*, Commission of the European Communities, Com (75) 574, p-77.

7. Vessels can be used to haul feed out to aquaculture pens, house crews, lift netting, etc.

8. In our introduction the authors indicated that we would concentrate on high-seas fleets. However, in this section we were required to deal with the entire fleet (small coastal vessels up to super trawlers). Unfortunately, many of the policies affecting the size of the fleet were applied across the board. In order to understand the development of the EC program to control the growth of the fleet it was necessary to investigate the entire fleet, and not simply the high-seas fleet.

9. *The European Community's Fishery Policy*, Office for Official Publications of the European Communities, Periodical 1/1985, Luxembourg,1985, p. 21.

10. *The European Community's Fishery Policy*, Office for Official Publications of the European Communities, Periodical 1/1985, Luxembourg,1985, p. 21-22. Higher fuel prices were also making it difficult to operate older, less efficient high-seas vessels.

11. One of the EC officials who helped craft and implement the CFP calls it a disastrous failure. He believes it is a text-book case of the perils of trying to manage fisheries by modifying the increasingly accurate scientific assessments as a result of conflicting political demands. Michael J. Holden, *The Common Fisheries Policy: Origin, Evaluation, and Future*, (Buckland Foundation: Oxford, 1993), p. 320.

12. Council Directive 83/515/EEC.

13. Council Directive of 4 October 1983 concerning certain measures to adjust capacity in the fisheries sector (83/515/EEC), *Official Journal of the European Communities*, No. L. 290/15, October 22, 1983.

14. Vessels withdrawn according to Council Directive 83/515/EEC, *Official Journal of the European Communities,* No. C. 276/1, November 1, 1986.

15. The decline in North Sea cod and haddock stocks is explained in the *Report 1991 from the Commission to the Council and the European Parliament on the Common Fisheries Policy*, Commission of the European Communities, SEC(91) 2288, Brussels, December 18, 1991, p. 47.

16. Commission Decision of 11 December 1987 on the multiannual guidance programme for the fishing fleet (1987 to 1991) forwarded by {Country} pursuant to Regulation (EEC) No 4028/86, *Official Journal of the European Communities*, No. L 70/19, March 16, 1988.

17. Commission Regulation (EEC) No 163/89 of 24 January 1989 concerning the fishing vessel register of the Community, *Official Journal of the European Communities,* No. L 20/5, January 25, 1989.

18. In December 1990, Fisheries Commissioner Manuel Marin had anounced that the capacity of the EC fishing fleet must be reduced by at least 40% over the next 10 years if important fishery resources were to be saved. See: "Marin plans 40% cut in EC fishing capacity over 10 years," *Eurofish Report,* December 6, 1990, p. BB/1.

19. "EC Needs Urgent Cut in Fleets Warns Commissioner," *Fishing News International*, January 1991.

20. Oliver, Tim. "EEC block on new boat grants," *Fishing News International*, June 1990 and *Eurofish Report*, May 10, 1990, pp. BB/1-2.

21. Proposal for a Council Regulation (EEC) amending Regulation (EEC) No 4028/86 on Community measures to improve and adapt structures in the fisheries and aquaculture sector, COM(90) 358 final, Submitted by the Commission on 27 July 1990), Official *Journal of the European Communities*, No. C 243/6, September 9, 1990.

22. Unless otherwise indicated, "fishing fleet" refers to all vessels in a fishing fleet while "high-seas fishing fleet" refers only to vessels over 500-GRT.

23. *Eurofish Report*, December 3, 1992, p. BB/1.

24. *Report 1991 from the Commission to the Council and the European Parliament on the Common Fisheries Policy*, Commission of the European Communities, SEC(91) 2288, Brussels, December 18, 1991, p. ii.

25. This is an approximate conversion of ECU 350 million at ECU1.00 = US$1.15. The ECU has been fluctuating in recent months and the actual amount is probably higher.

26. Court of Auditors Special Report no. 3/93 - *The implementation of the measures for the restructuring, modernisation and adaption of the capacities of fishing fleets in the Community* as reported in "Report highlights limited success of 1987-90 EC fleet restructuring grants," *Eurofish Report,* June 17, 1993, p. BB/1.

27. Court of Auditors Special Report no. 3/93 - *The implementation of the measures for the restructuring, modernisation and adaption of the capacities of fishing fleets in the Community* as reported in "Report highlights limited success of 1987-90 EC fleet restructuring grants," *Eurofish Report,* June 17, 1993, p. BB/1.

28. "EC agrees grants worth 23 million ECU," *Eurofish Report*, May 6, 1993, p. BB/1.

29. The following description of the various EC fishery agreements is based upon the press reports gathered by the authors. In some instances, the authors have not been able to obtain complete information from EC and coastal country sources and as a result some of the individual country discussions may not cover all of the agreements and extensions.

30. The EC has had jurisdiction over fisheries agreement since 1976.

31. The status of some of these agreements (i.e., with Dominica, Gabon, Sierra Leone and Tanzania) are uncertain. NMFS may have missed a few countries, but believes our numbers to be fairly accurate.

32. Information that follows was obtained from a number of sources, including: P. De Pasquale, *REPORT: on fisheries agreements between the Community and third countries*, drawn up on behalf of the Committee on Agriculture, Fisheries and Food, European Parliament, Working Documents, English Edition, WB(VS1)4505E, Document A-160/86, November 26, 1986.

33. The number of vessels involved exceeds the total number of EC high-seas vessels because many of these vessels are less than 500 GRT, but deployed as high-seas vessels, such as tuna baitboats. Others are EC owned, but based in coastal country ports.

34. Fishery agreements are widely reported in the European press which the authors follow. The limited number of publications available on African countries and the authors limited access to African press sources has impaired the coverage of EC-African negotiations in more detail. Thus the following country text may not be a complete description of every agreement signed or renegotiated. It does, however, provide a general overview of EC activities in Africa.

35. The predecessor to NAFO.

36. Agreement concerning fisheries off the coasts of the United States, with Annexes, February 15, 1977. Signed at Washington, February 15, 1977. Approved by Public Law 95-8, March 3, 1977. Entered into force on June 9, 1977. The United States had previously signed agreements with individual EC members and these agreements were gradually assumed by the EC as the responsible authority.

37. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 54. In 1978, for example, the United States allocated 888 tons of fish to West Germany, 1,493 tons to France, and 4,125 tons of fish to Italy.

38. U.S. Department of Commerce, *Fisheries of the United States, 1990*, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., May 1991, p.25. The total North Atlantic allocation was 37,000 tons in 1989 and this declined to 9,200 tons in 1990; no EC vessels have fished in U.S. waters since 1989.

39. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 55.

40. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 55.

41. NAFO replaced the International Convention for the Northwest Atlantic Fisheries (ICNAF) on January 1, 1979. Its members included Canada, the USSR, Romania, the German Democratic Republic, the Federal Republic of Germany, France, Italy, Portugal, Norway, Denmark, and the United Kingdom. OECD, *Review of*

Fisheries, 1978, Organization for Economic Co-Operation and Development, Paris, 1979, p. 50.

42. OECD, *Review of Fisheries, 1980*, Organization for Economic Co-Operation and Development, Paris, 1981, p.52.

43. John Crosby, Minister of Fisheries and Oceans, Canadian oral intervention, Responsible Fisheries Conference, Cancun, Mexico, May 7, 1992.

44. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 62.

45. *Official Journal of the European Communities,* No L 378/57-58, December 31, 1990.

46. OECD, *Review of Fisheries, 1978*, Organization for Economic Co-Operation and Development, Paris, 1979, p. 64.

47. The current Icelandic 200-mile EEZ does, however, overlap the 200-mile EEZ of the Faroes and Greenland, countries with a close relationship to EC-member Denmark.

48. OECD, *Review of Fisheries, 1978*, Organization for Economic Co-Operation and Development, Paris, 1979, p. 112 and "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 56.

49. This agreement was approved by the Council of the European Communities on June 24, 1993.

50. Council Regulation (EEC) No 1737/93 of 24 June 1993 on the conclusion of the Agreement on fisheries and the marine environment between the European Economic Community and the Republic of Iceland, *Official Journal of the European Communities*, No L 161/1, July 2, 1993.

51. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 54.

52. U.S. Embassy, Brussels, February 8, 1982.

53. U.S. Embassy, Brussels, February 8, 1982.

54. *Official Journal of the European Communities,* "Council Regulation (EEC) No 3888/91 of 18 December 1991 laying down for 1992 certain measures for the conservation and management of fishery resources applicable to vessels registered in the Faroe Islands," No L 367 /59, December 31, 1991.

55. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 53.

56. *Quota Regulations in Norwegian Fisheries Zones*, The Royal Norwegian Ministry of Fisheries, Oslo, August 25, 1989.

57. "Norway acts on fishing in Barents Sea "Loophole," U.S. Embassy, Oslo, Norway, August 18, 1993.

58. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 54.

59. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 54.

60. Council Regulation (EEC) No 520/93 of 2 March 1993 on the conclusion of the Agreement on fisheries relations between the European Economic Community and the Republic of Latvia, *Official Journal of the European Communities,* No L 56/5, March 9, 1993.

61. Council Regulation (EEC) No 521/93 of 2 March 1993 on the conclusion of the Agreement on fisheries relations between the European Economic Community and the Republic of Latvia, *Official Journal of the European Communities,* No L 56/9, March 9, 1993.

62. Council Regulation (EEC) No 519/93 of 2 March 1993 on the conclusion of the Agreement on fisheries relations between the European Economic Community and the Republic of Latvia, *Official Journal of the European Communities,* No L 56/1, March 9, 1993.

63. "Danes prepare for workmanlike Council," *Eurofish Report*, June 17, 1993, p. BB/3.

64. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 56. The EC has, however, negotiated an agreement with Morocco which does include fisheries conducted in the Mediterranean.

65. Italy had a fisheries agreement with Tunisia signed on June 19, 1976 and an agreement with Yugoslavia signed on June 15, 1973, which was later extended until December 31, 1978. OECD, *Review of Fisheries, 1978*, Organization for Economic Co-Operation and Development, Paris, 1979, p. 129.

66. The Greek-Libyan joint venture fishery operations began in 1977 and ended in 1983. OECD, *Review of Fisheries, 1983*, Organization for Economic Co-Operation and Development, Paris, 1984, p. 97.

67. Official Journal of the European Communities, "Council Regulation (EEC) No 3213/84 of 6 November 1984 opening, allocating, and providing for the administration of a Community tariff quota for prepared or preserved sardines falling within subheading.

68. NMFS files on Italian operations off both countries are incomplete.

69. William B. Folsom, "Morocco-EC Fisheries Agreement," *International Fisheries Report* (IFR-88/71), National Marine Fisheries Service, NOAA, U.S. Department of Commerce, July 29, 1988. This IFR provides an extensive examination of the agreement and its terms.

70. "World Fishing Fleet Study," U.S. Embassy, Rabat, July 1, 1993.

71. "World Fishing Fleet Study," U.S. Embassy, Rabat, July 1, 1993.

72. William B. Folsom and Dennis M. Weidner, "Fisheries of Mauritania, 1974, *Foreign Fisheries Leaflet, No. 76-3,* Office of International Fisheries, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., October 1976.

73. OECD, *Review of Fisheries, 1978*, Organization for Economic Co-Operation and Development, Paris, 1979, p. 106.

74. OECD, *Review of Fisheries, 1983*, Organization for Economic Co-Operation and Development, Paris, 1984, p. 97 and *Fishing News International*, "Mauritania agrees to fishing deal with the European Community,"

January 1979.

75. *Eurofish Report*, "EEC and Mauritania nearer to agreement, April 12, 1984.

76. *Official Journal of the European Communities,* "Council Regulation (EEC) No.4143/87 of 14 December 1987 concerning the conclusion of the Agreement between the European Economic Community and the Islamic Republic of Mauritania on fishing off the coast of Mauritania and adopting provisions for its application," No. L 388/1, December 31, 1987.

77. *Official Journal of the European Communities,* "Council Regulation (EEC) No. 1177/91 of 18 April 1991 on the conclusion of the Protocol setting out, for the period from 1 August 1990 to 31 July 1993, the fishing opportunities and financial contribution provided for in the Agreement between the European Economic Community and the Islamic Republic of Mauritania on fishing off the coast of Mauritania," No. L 117/1, October 5, 1991.

78. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 55.

79. *Official Journal of the European Communities,* "Council Regulation (EEC) No 559/87 of 23 February 1987 on the conclusion of the Protocol establishing the fishing rights and financial compensation provided for in the Agreement between the European Economic Community and the Government of the Republic of Senegal on fishing off the coast of Senegal for the period from 1 October 1986 to 28 February 1988, No. L 57/1, February 27, 1987.

80. *Official Journal of the European Communities,* "Council Decision of 3 May 1988 on the conclusion of the Agreement in the form of an Exchange of Letters concerning the provisional application of the Protocol setting out the fishing rights and financial compensation provided for in the Agreement between the Government of the Republic of Senegal and the European Economic Community on fishing off the coast of Senegal for the period from 29 February 1988 to 28 February 1990 (88/296/EEC), No. L 127/15, May 20, 1988.

81. *Official Journal of the European Communities,* "Council Decision of 27 July 1990 on the conclusion of the Agreement in the form of an Exchange of Letters concerning the provisional application of the Protocol setting out the fishing rights and financial compensation provided for in the Agreement between the Government of the Republic of Senegal and the European Economic Community on fishing off the coast of Senegal for the period from 1 May 1990 to 30 April 1992 (90/407/EEC), No. L 208/36, August 7, 1990.

82. *Official Journal of the European Communities,* "Council Decision of 27 July 1990 on the conclusion of the Agreement in the form of an Exchange of Letters concerning the provisional application of the Protocol setting out the fishing rights and financial compensation provided for in the Agreement between the Government of the Republic of Senegal and the European Economic Community on fishing off the coast of Senegal for the period from 1 May 1990 to 30 April 1992 (90/407/EEC), No. L 208/36, August 7, 1990.

83. "Council finally endorses Senegal protocol," *Eurofish Report,* July 29, 1993, p. BB/3.

84. Eurofish Report, "EEC Commission pursues fisheries agreement with Gambia," January 31, 1985, p. BB/5.

85. *Fishing News (UK)*, "EEC deal with the Gambia," July 5, 1987.

86. *Official Journal of the European Communities,* Council Regulation (EEC) No. 1580/87 of 2 June 1987 concerning the conclusion of the Agreement between the European Economic Community and the Government of the Republic of the Gambia on fishing off the Gambia and adopting provisions for its application, No L 146/1, June 6, 1987.

87. *Official Journal of the European Communities,* Protocol establishing for the period from 1 July 1990 to 30 June 1993 the fishing rights and financial compensation provided for in the Agreement between the European Economic Community and the Republic of the Gambia on fishing off the Gambia, No L 379/17, December 31, 1990.

88. "L'accord avec la Gambie compromis," *La Pêche Maritime,* June-July 1993, p. 260.

89. "EC-Gambia accord to be renewed," *Eurofish Report*, May 20, 1993, p. BB/3.

90. "World Fishing Fleet Study," U.S. Embassy, Banjul, The Gambia, June 29, 1993.

91. U.S. Embassy, Bissau, July 2, 1979 and *La Peche Maritime,* "Publication de l'accord de pêche avec la C.E.E.," July 20, 1980.

92. Council of the European Communities, General Secretariat, *Press Release*, Brussels, March 15, 1983.

93. *Eurofish Report*, "Guinea-Bissau agreement extended for three years," No. 239, September 25, 1986. The new agreement was in force from June 16, 1986 until June 15, 1989.

94. *Official Journal of the European Communities,* "Council Decision of 18 December 1989 on the conclusion of the Agreement in the form of an exchange of letters concerning the provisional application of the protocol establishing for the period 16 June 1989 to 15 June 1991 the fishing rights and financial compensation provided for in the Agreement between the European Economic Community and the Government of the Republic of Guinea-Bissau on fishing off the coast of Guinea-Bissau (89/675/EEC), No. l 398/1. December 30, 1989.

95. "The European Community's Fishery Policy," *Office for Official Publications of the European Communities*, Luxembourg,1985, p. 55.

96. *Official Journal of the European Communities,* "Council Regulation (EEC) No 2322/90 of 24 July 1999 on the conclusion of the Protocol establishing for the period 1 January 1990 to 31 December 1991, the fishing rights and financial compensation provided for in the Agreement between the European Economic Community and the Government of the Republic of Guinea-Bissau on fishing off the coast of Guinea-Bissau (90./227/EEC), No L 125/43, May 15, 1990. The reduction in the number of tuna vessels reflected the desires of the EC.

97. Council Decision on the conclusion of the Agreement in the form of an exchange of letters concerning the provisional application of the Protocol establishing for the period 16 June 1991 to 15 June 1993, the fishing rights and financial compensation provided for in the Agreement between the European Economic Community and the Government of the Republic of Guinea-Bissau on fishing off the coast of Guinea-Bissau, European Communities, Brussels, October 7, 1991.

98. "Council finally endorses Senegal protocol," *Eurofish Report,* July 29, 1993, p. BB/3.

99. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 55.

100. *Official Journal of the European Communities,* "Agreement between the European Economic Community and the Republic of Cape Verde on fishing off the coast of Cape Verde," No C 115/9, May 9, 1990.

101. *West Africa*, "Siaka reports on EEC visit, October 15, 1979, p. 1913.

102. *Official Journal of the European Communities*, "Council Regulation (EEC) No 1237/90 of 25 April 1990 on the conclusion of the Agreement between the European Economic Community and the Republic of Sierra Leone on fishing off Sierra Leone, No L 125/27, May 15, 1990.

103. *Official Journal of the European Communities.* "Proposal for a Council Regulation (EEC) on the conclusion of the Agreement between the European Economic Community and the Republic of the Ivory Coast on fishing off the Ivory Coast," COM(90) 374 final, August 3, 1990.

104. *Official Journal of the European Communities,* "Council Decision of 22 October 1983 on the provisional application of the Agreement between the European Economic Community and the Government of the Democratic Republic of São Tomé and Principe on fishing off São Tomé and Principe, (83/503/EEC), October 14, 1983. The agreement appears to have been formally signed in Brussels on February 1, 1984.

105. *Official Journal of the European Communities,* "Council Regulation (EEC) No 1295/91 of 14 May 1991 on the conclusion of the Protocol establishing, for the period from 1 June 1990 to 31 May 1993, the fishing rights and financial compensation provided for in the Agreement between the European Economic Community and the Government of the Democratic Republic of São Tomé and Principe on fishing off São Tomé and Principe", No L 123/1, May 18, 1991.

106. "Council finally endorses Senegal protocol," *Eurofish Report,* July 29, 1993, p. BB/3.

107. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 55.

108. *Official Journal of the European Communities*, "Council Decision of 11 December 1986 on the conclusion of an Agreement in the form of an Exchange of Letters concerning the provisional application of the Agreement amending the Agreement between the European Economic Community and the Government of the Republic of Equatorial Guinea on fishing off the coast of Equatorial Guinea, signed at Malabo on 15 June 1984 for the period starting on 27 June 1986," (86/636/EEC), No. L 372/18, December 31, 1986.

109. *Official Journal of the European Communities*, "Council Regulation (EEC) No. 1236/90 of 25 April 1990 on the conclusion of the Protocol establishing for the period 27 June 1989 to 26 June 1992 the fishing rights and financial compensation provided for in the Agreement between the European Economic Community and the Government of the Republic of Equatorial Guinea on fishing off the coast of Equatorial Guinea," No L 125/17, May 15, 1990.

110. U.S. Embassy, Brussels, March 14, 1988.

111. U.S. Embassy, Brussels, May 6, 1987.

112. *Official Journal of the European Communities,* Council Decision of 28 July 1989 on the conclusion of the Agreement in the form of an Exchange of Letters on the provisional application of the Protocol defining, for the period 3 May 1989 to 2 May 1990, the fishing opportunities and financial compensation provided for in the Agreement between the European Economic Community and the Government of the People's Republic of Angola on fishing off Angola, (89/486/EEC), No L 239/91, July 16, 1989.

113. U.S. Embassy, Brussels, August 4, 1989.

114. *Official Journal of the European Communities,* Council Decision of 27 June 1990 on the conclusion of the Agreement in the form of an Exchange of Letters on the provisional application of the Protocol establishing, for the period from 3 May 1990 to 2 May 1992, the fishing opportunities and financial compensation provided for in the Agreement between the European Economic Community and the Government of the People's Republic of

Angola on fishing off Angola, (90/409/EEC), No L 208/41, July 7, 1990.

115. U.S. Embassy, Windhoek, November 2, 1990. An attempt to regulate fishing was begun in 1969 by the FAO and later with the creation of ICSEAF in 1978.

116. The Spanish fleet included 155 vessels of the National Association of Hake Freezer Trawler Owners (ANAMER) based out of Vigo, Spain. There were also 40 ships operating with a Spanish association identified as ASPE and 7 with ANAC for a total of 202 Spanish ships. *Eurofish Report,* April 26, 1990, p. FS/1 and *Fishing News International, 1990.*

117. ECU 100 million. *Eurofish Report,* May 24, 1990.

118. U.S. Embassy, Windhoek, November 2, 1990.

119. U.S. Embassy, Windhoek, April 16, 1991.

120. However, on April 14, 1993, the Congolese registered *Loukoula* was boarded and seized by Namibian fisheries inspectors for fishing without a license inside Namibia's EEZ. The vessel was escorted to Luderitz where the senior officers, all Spanish nationals, were taken to court. The *Loukoula* was reportedly owned by a Spanish company and registered in Panama in 1992, but was officially registered by Pepimex Company of Pointe Noire in the Congo in 1993.

121. "Fish wars: Namibians catch a Congolese boat, while Europeans restrict their markets," U.S. Embassy Windhoek, April 20, 1993.

122. "Fish wars: Namibians catch a Congolese boat, while Europeans restrict their markets," U.S. Embassy Windhoek, April 20, 1993.

123. "Namibian pilchards for canned products," *Seafood News*, June 1993, p. 6.

124. "Namibian pilchards for canned products," *Seafood News*, June 1993, p. 6.

125. *Official Journal of the European Communities*, "Council Decision of 22 March 1990 authorizing the Portuguese Republic to extend until 8 April 1991 the agreement on mutual fishery relations with the Republic of South Africa," (90/149/EEC), No. L 81/37, March 28, 1990.

126. Council Decision of 6 April 1993 authorizing the Kingdom of Spain to extend until 7 March 1994 the Agreement on mutual fishery relations with the Republic of South Africa (93/205/EEC), *Official Journal of the European Communities*, No L 88/45, April 8, 1993 and Council Decision of 6 April 1993 authorizing the Portuguese Republic to extend until 7 March 1994 the Agreement on mutual fishery relations with the Republic of South Africa (93/206/EEC), *Official Journal of the European Communities*, No L 88/46, April 8, 1993.

127. The companies involved are Neptune Trawlers, Pict Holdings, and the South Atlantic Fishing Company. Neptune and Pict operate out of Durban. It is not known where the three vessels operated by the South Atlantic Fishing Company are based. S.R. Fordham, Chief Marine Surveyor, Cayman Islands, personal communications, June 4, 1993.

128. U.S. Embassy, Maputo, March 23, 1983.

129. Official Journal of the European Communities, "Council Regulation (EEC) No 2143/87 of 13 July 1987 concerning the conclusion of the Agreement between the European Economic Community and the Government of the People's Republic of Mozambique on fisheries relations," No. l 201/1, July 22, 1987. This agreement

apparently was signed in Maputo on October 1, 1988 when it entered into force.

130. *Official Journal of the European Communities*, "Council Decision of 22 January 1990 on the conclusion of an Agreement in the form of an Exchange of Letters concerning the provisional application of the Protocol establishing, for the period from 1 January 1990 to 31 December 1991, the fishing opportunities and the financial contribution provided for in the Agreement between the European Economic Community and the Government of the People's Republic of Mozambique on fisheries relations," (90/41/EEC), No L 22/74 January 27, 1990.

131. *Official Journal of the European Communities*, "Council Regulation (EEC) No 1454/90 of 28 May 1990 relating to the conclusion of the Protocol establishing, for the period from 1 January 1990 to 31 December 1991, the fishing opportunities and the financial contribution provided for in the Agreement between the European Economic Community and the Government of the People's Republic of Mozambique on fisheries relations," No L 140/1,June 1, 1990.

132. U.S. Embassy, Brussels, January 14, 1985.

133. *Official Journal of the European Communities,* "Proposal for a Council Regulation (EEC) on the conclusion of the Agreement amending the Agreement between the European Economic Community and the Government of the Democratic Republic of Madagascar signed in Antananarivo on 28 January 1986," COM(87)86 final, March 6, 1987.

134. U.S. Embassy, Brussels, August 4, 1989.

135. Council Regulation (EEC) No. 983/93 of 6 April 1993 relating to the conclusion of the Protocol defining, for the period 21 May 1992 to 20 May 1995 the fishing opportunities and the financial contribution provided for by the Agreement between the European Community and the Government of the Democratic Republic of Madagascar on fishing off Madagascar, *Official Journal of the European Communities,* No L 106/1, April 30, 1993 and Protocol.

136. *Official Journal of the European Communities,* "Council Regulation (EEC) No 3941/90 of 19 December 1990 concerning the conclusion of the Agreement between the European Economic Community and the United Republic of Tanzania on fishing off Tanzania, No L 3779/24, December 31, 1990. The document does not provide any information on the number of vessels authorized to fish in Tanzania's waters nor the terms of compensation.

137. *Official Journal of the European Communities*, "Proposal for a Council Regulation (EEC) on the conclusion of the Agreement between the European Economic Community and the Islamic Federal Republic of the Comoros on fishing off Comoros," COM(88) 30 final, February 15, 1988 and Council of the European Communities, *Press Release*, Brussels, July 20, 1988 (7607/88).

138. *Official Journal of the European Communities*, "Council Decision of 17 December 1991 on the conclusion of the Agreement in the form of an exchange of letters concerning the provisional application of the Protocol establishing the fishing opportunities and financial contribution provided for in the Agreement between the European Economic Community and the Islamic Federal Republic of the Comoros on fishing off Comoros from the period from 20 July 1991 to 19 July 1994," (92/9/EEC), No l\L 6/33, January 11, 1992.

139. *Eurofish Report*, "Mauritius allowed to continue importing tuna for re-export to EEC," September 27, 1984, and Official Journal of the European Communities, various documents allowing this agreement to be extended. Other documents may exist.

140. *Official Journal of the European Communities*, "Council Regulation (EEC) No. 1616/89 of 5 June 1989 on the conclusion of an Agreement between the European Economic Community and the Government of Mauritius on fishing in Mauritian waters, No L 159/1 of June 5, 1989 and *Official Journal of the European Communities*, "Agreement between the European Economic Community and the Government of Mauritius on fishing in Mauritian waters," No. L. 159/2, June 10, 1989

141. "The European Community's Fishery Policy," Office for Official Publications of the European Communities, Luxembourg,1985, p. 56.

142. *Official Journal of the European Communities,* "Council Regulation (EEC) No. 3193/90 of 29 October 1990 on the conclusion of the Protocol defining, for the period from 18 January 1990 to 17 January 1993, the fishing opportunities and financial contribution provided for in the Agreement between the European Economic Community and the Republic of Seychelles on fishing off Seychelles," No L 306/1, November 6, 1990.

143. Commission Proposal for a Council Decision on the conclusion of the Agreement in the form of an exchange of letters concerning the provisional application of the Protocol defining for the period 18 January 1993 to 17 January 1996 the fishing opportunities and the financial contribution provided for by the Agreement between the European Economic Community and the Republic of Seychelles on fishing off the coast of Seychelles, (93/C 100/06), COM(93) 90 final, *Official Journal of the European Communities*, No C 100/23, April 8, 1993 and Protocol defining for the period 18 January 1993 to 17 January 1996 the fishing opportunities and the financial contributions provided for by the Agreement between the European Community and the Republic of Seychelles on fishing off Seychelles, *Official Journal of the European Communities*, No C 100/26, April 8, 1993.

144. For details on Argentine-Soviet fishery relations, see Jacobson, Don and Dennis Weidner, "Soviet-Latin American Fishery Relations, 1961-89," *International Fishery Reports* (IFR-89/39), Office of International Fisheries, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., May 5, 1989, pp. 25-46.

145. None of the other Western European countries reported catches exceeding 10,000 tons. The quantities referred to are totals taken in the Southwest Atlantic. The authors believe that most of this catch was harvested off the Falklands, but some may have also been taken on the high-seas outside the Falkland and Argentine zones.

146. "Pesquero 1979," *Chile Pesquero*, September 1980.

147. Mareiro, "1983, mejor de lo que esperaba," *Industrias Pesqueras*, January, 1984.

148. The Servicio Nacional de Pesca (SERNAP) annually reports on factory vessels. The authors believes that these are primarily foreign-owned vessels. SERNAP *Anuario Estadistico de Pesca*, 1991.

149. "Prosiguen las protestas de los armadores de la flota palangera congeladora," *Industrias Pesqueras*, April 15, 1993, p. 35 and "Los armadores de barcos palagreros contrarios a la actitud de las autoridades chileanas," *Industrias Pesqueras*, March 15, 1991, p. 31.

150. Germany has provided fisheries assistance to both the Instituto del Mar (IMARPE) and the Insituto Tecnologico Pesquero (ITP). The assistance has included various technical exchanges and the construction of the R/V *Humboldt*. The Netherlands provided credits to help state companies purchase refrigerated trucks and used fishing vessels. FLOPESCA, the state company purchasing the vessels, however, experienced major difficulties operating the vessels. The British have a small technical mission which works with the INP. The EC itself has sponsored fisheries technical assistance which has included contracting a French company to assist the Peruvian shrimp culture industry. For details see Francisco Quintanilla and Dennis Weidner, "Peruvian

bilateral fishery relations," *International Fishery Report* (IFR-88/88), September 2, 1988.

151. "España y los bancos de pesca ecuatorianos," *Industrias Pesqueras*, May 1977 and untitled item, *La Pêche Maritime*, July 1977.

152. See for example U.S. Embassy, Quito, November 5, 1975.

153. Associated vessels during the 1970s and 1980s continued to be owned by the foreign company, but were authorized to fly the Ecuadorean flag and are entitled to all the benefits which domestic vessels are entitled to, such as purchasing fuel at domestic prices and the right to operate in a coastal zone exclusively for domestic fishermen. The associated vessels, however, have to land their catch in Ecuador and are subject to Ecuadorean taxes and regulations. "Law of Fisheries and Fisheries Development," Article 29; U.S. Consulate, Guayaquil, November 26, 1980; and U.S. Embassy, Quito, April 20, 1988. Press reports indicated that the Ecuadorean Government was considering modifications of the law authorizing the association contracts and some fishery observers felt this would cause to terminate operations off Ecuador. "Píis puede quedarse sin flota pesquera asociada," *El Universo*, February 8, 1989. The authors do not have current details as to whether such arrangements continue or if the regulations have been modified.

154. Carlos Zarate, INEPACA, personal communications, December 11, 1979 and U.S. Consulate, Guayaquil, November 26, 1980.

155. Michael Hinton, "Estimated Catch and Fleet Information for the Eastern Pacific Ocean Tuna Fleet," *Inter-American Tropical Tuna Commission*, Report No. 93-23, January 1-July 19, 1993.

156. U.S. Consulate, Martinique, October 7, 1987.

157. Commission, Proposal for a Council Regulation (EEC) concerning the conclusion of the Agreement between the European Economic Community and the Government of the Commonwealth of Dominica on fisheries (93/C 183/06), *Official Journal of the European Communities*, No C 183/11, July 6, 1993 and Protocol between the European Economic Community and the Government of the Commonwealth of Dominica on conditions relating to reciprocal access for fishing vessels of both Parties, *Official Journal of the European Communities*, No C 183/15, July 6, 1993

158. *Eurofish Report*, December 3, 1992, p. BB/9.

159. The EC ratified the agreement in September 1993. No word has been received as to the status of the Argentine Government's ratification of the agreement.

160. The EC did agree to make available ECU 28 million to help in fisheries research, port infrastructure development, vocational and technical training, and technical development programs in Argentina. *Eurofish Report*, December 3, 1992, p. BB/10.

161. These vessels will thus be officially removed from EC rolls as part of the fleet reduction program outlined in the MAGP for 1993-96. *Eurofish Report*, December 3, 1992, p. BB/9.

162. The United Kingdom has registered an official reserve on the treaty. The objections involve questions concerning the demarcation lines between Argentina and the Falkland Islands and questions about migration of squid into Argentine waters. The issue should not block the implementation of the agreement. *Eurofish Report*, December 3, 1992, p. BB/10.

163. This was a headline story in the May 1993 issue of *Fishing News International*.

164. *Eurofish Report*, November 22, 1990.

165. "Little progress on Latin American accords," *Eurofish Report*, February 22, 1993, p. BB/1.

166. This thought was recently expressed in an article entitled "Previsible descenso de las exporaciones Chilenas", *Industrias Pesqueras,* June 1, 1993, p. 38.

167. Argentine officials have been concerned for years over the expanding foreign fishing in the South Atlantic and the British granting of fishing licenses to foreign fishermen operating off the Falklands. The British and Argentines have meet periodically to discuss conservation measures in the South Atlantic and while some level of cooperation has emerged, the Argentines continue to be concerned. Partly in response, the Argentine Government reversed its policy on foreign fishing in 1992. After years of discouraging foreign fishing, the Argentine Government began granting licenses to foreign fishermen in 1992.

168. This stock was heavily fished by Soviet, Cuban, and other east bloc countries from the late 1960s to the early 1990s. For details see Don Jacobson and Dennis Weidner, "Soviet-Latin American Fishery Relations, 1961-89," *International Fishery Reports* (IFR-89/39), May 5, 1989 and Tracy Thomas, "Cuban Fishery Relations in the Americas, 1959-88," *International Fishery Reports* (IFR-88/59), June 29, 1988. Cuba withdrew from the fishery in 1991 and press reports indicate the Russians withdrew in early 1993.

169. Coastal countries are increasingly concerned about the fishing straddling stocks on the high-seas. Multilateral discussions addressing this issue are currently underway. A major U.N. sponsored meeting is scheduled to take place in July 1993 in New York.

170. One report indicated 214 Spanish vessels were operating off Namibia on March 31, 1990, when the Namibian Government ordered all foreign-flag vessels out of its territorial waters. Obviously the question of the number of vessels which will be allowed to return is subject to negotiation.

171. Namibia's fishing quota has been increased from 80,000 tons in 1992 to 115,000 tons in 1983. "Namibian pilchards for canned products," *Seafood News*, June 1993, p.6.

172. The vessels reportedly fish in the North Sea, off the Shetlands, north and west of Scotland, as well as west and south of Ireland. The vessel fishes for mackerel, horse mackerel, herring, and silver smelt. "Pelagics frozen on-board," *Seafood News*, July 1993, p. 13.

173. The *Gueriden*, a French tuna seiner, was launched in October 1991. This tuna purse seiner is listed at 1,600-GRT and was expected to fish in the Indian Ocean. It is the newest in a growing number of 1,600-GRT tuna purse seiners in the French fleet assigned to fish for tuna in the Indian Ocean. Other tuna seiners launched for French companies in 1991 include the *Via Mistral* (1,600-GRT), and the *Guéotec* (1,600-GRT).

174. *International Trade Commission*, "Tuna: Competitive conditions affecting the U.S. and European tuna industries in domestic and foreign markets," Report to the Committee on Finance, U.S. Senate, and the Committee on Ways and Means, U.S. House of Representatives, Investigation No. 332-291, Under Section 332 of the Tariff Act of 1930, USITC Publication 2339, Washington, D.C., December 1990, p. 4-1 to 4-2.

175. Michael Hinton, "Estimated Catch and Fleet Information for the Eastern Pacific Ocean Tuna Fleet," *Inter-American Tropical Tuna Commission*, Report No. 93-23, January 1-July 19, 1993.

176. *Le Marin*, January 10, 1992, p. 14. Landings alone are not enough; French fishermen have complained bitterly about decreasing prices for their tuna at the same time that prices for fuel are increasing.

177. Unpublished report from the Instituto Español de Oceanografia and *International Trade Commission*, "Tuna: Competitive conditions affecting the U.S. and European tuna industries in domestic and foreign markets," Report to the Committee on Finance, U.S. Senate, and the Committee on Ways and Means, U.S. House of Representatives, Investigation No. 332-291, Under Section 332 of the Tariff Act of 1930, USITC Publication 2339, Washington, D.C., December 1990, pp.4-2 to 4-3.

178. The Spanish catch of tuna in the Pacific was reported at 4,312 tons in 1987 according to *Industrias Pesqueras*, "Flota atunera: Una de las mas dinamicas del sector Español "a pesar de la administracion,"" November 10, 1988, p. 29 and Michael Hinton, "Estimated Catch and Fleet Information for the Eastern Pacific Ocean Tuna Fleet," *Inter-American Tropical Tuna Commission*, Report No. 93-23, January 1-July 19, 1993.

179. The companies involved are Neptune Trawlers, Pict Holdings, and the South Atlantic Fishing Company. Neptune and Pict operate out of Durban. It is not known where the three vessels operated by the South Atlantic Fishing Company are based. S.R. Fordham, Chief Marine Surveyor, Cayman Islands, personal communications with Dennis Weidner, June 4, 1993.

180. "Norway acts on fishing in Barents Sea "loophole," U.S. Embassy, Oslo, Norway, August 18, 1993 and Nick Wade, "Barents Sea 'Hole' Dispute," *Fishing News International*, September 1993, p.1-2.

EC COUNTRY REPORTS

2.1

BELGIUM

Belgium decommissioned its only high-seas vessel, the *John*, in 1990. Belgium has no vessels to deploy and the authors are not aware of any plans to build or buy any replacement vessels. A Belgium firm is involved in the reflagging of Taiwanese longline vessels in Honduras.

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1. General Background

The Belgian fishing fleet, one of the smallest in Western Europe, landed 36,609 tons of fish in 1992. The fleet is deployed in coastal fisheries along the Belgian coast and neighboring countries and catches mostly plaice, cod, dogfish, sole, whiting, turbot, lemon sole, skate, and monkfish. This fish is landed fresh commanding high prices in the local market. With a coastline of only about 73 kilometers there is only a limited future for fishing.[1] There is little chance that Belgian vessels will appear in distant waters in the next few years because the Belgian coastal fleet is not capable of distant-water operations and fishermen have no current plans to acquire distant-water vessels. Belgium is Western Europe's sixth largest market for fishery products.

2. Fleet Background

The Belgian fishing industry has received support from the Belgian Government for many years. The Maritime Credit Act of 1948 was an early effort by the Belgian government to provide assistance in the construction of fishing vessels. Government efforts to modernize or reduce the fishing fleet are restricted to vessels under 500-GRT as the country had only one high-seas vessel. Belgian fishermen operated the *John*, a 555-GRT vessel, for nearly two decades, but this vessel was finally decommissioned in 1990. The Belgian fishing fleet consisted of 206 vessels with an estimated 27,089-GRT.[2]

3. Modernization Programs

Belgium has implemented a number of programs to modernize the country's fishing fleet. The Maritime Credit Act (Royal Decree of August 23, 1948) allows the Belgian Minister of Transport to provide financial assistance towards the construction of new fishing vessels. This takes the form of a reduced rate of interest on 70 percent of the investment over 15 years. The grant is only available if the engine power of the new fishing vessel is reduced by 10 percent as compared to the old vessel, and provided the new vessel does not exceed 1,200 horsepower. Belgian state credit assistance is also available for modernization of existing fishing vessels. State assistance can reduce interest rates on a 7-year loan, for example, by 10 percent of the total investment. When these investments are part of the European Community Multi-annual Guidance Program (MAGP), EC financial assistance may also be made available. Belgium has also received grants from the EC for modernizing its fishing fleet, but has not used these funds to purchase high-seas vessels.

4. Decommissioning Programs

The Royal Decree of June 29, 1984 identifies the process for receiving decommissioning grants. The Decree allows grants in the amount of approximately $10,000 per ton for scrapping, sale to a third country, or entry of the vessel into a new non-fisheries category. The Royal Decree of January 24, 1989, increased the size of the grant offered by the earlier decree. The new program offered greater premiums for heavier vessels to be decommissioned. The Royal Decree of October 30, 1991, again raised the premium and provided greater incentives for the decommissioning of ships. In order to regulate and control the Belgian fishing fleet, all fishing vessels are required to be licensed. The first licensing system was enacted in the Royal Decree of December 28, 1988, as amended by the Royal Decree of December 18, 1991. A Belgian fisherman must hold a government-issued license for the vessel. The Government restricts new entrants into the already heavily fished coastal grounds. The owner of a licensed vessel who wishes to replace the vessel with a new fishing vessel, must obtain a replacement license. Replacement licenses are issued only if the new vessel does not exceed the power and tonnage of the old vessel. Additionally, the old vessel must be permanently removed from the Belgian fishing fleet.

The Belgian Government must also comply with provisions of the EC MAGP to reduce the size of the fleet. The MAGP for Belgium contains the following provisions:

> The fleet should be maintained close to its 1982 level in terms of tonnage and horsepower, but modernization of the fishing industry is allowed to make sure that the fleet remains economically competitive.
>
> The fleet should remain comprised of small, owner-operated vessels.
>
> The fleet should remain at approximately 200 vessels with a total horsepower of about 96,000-hp.
>
> Priority should be given to modernizing coastal vessels (small trawlers and shrimpers) and then to multi-purpose vessels, not equipped with a beam trawl.

5. Shipyards

Belgian shipyards produce only a few vessels each year which replace aging fishing vessels. Most of the Belgian fishing fleet was built in Belgian shipyards. The Government does not provide subsidies to its shipyards for vessel construction.

6. International Agreements

The Belgians negotiated fishing rights for one vessel, the *John*, to fish in Icelandic waters, in 1975 before the EC was authorized to negotiate international fishery agreements on behalf of member sates. The agreement was extended in 1979 and expired in 1986.

Belgium, as part of the European Community, is able to take advantage of access to distant waters under agreements negotiated by the EC. Belgian fishermen operate under EC catch quotas, by species, in different parts of the EC. They fish for sole off the Isle of Man and in the Bristol Channel, plaice in the North Sea, and other species in the Bay of Biscay.[3] Belgian fishermen are able to fish and land their catches in Denmark, France, The Netherlands, and the United Kingdom.[4]

7. Fleet Dispersal Plans

The *John*, the only high-seas vessel operated by Belgium, was decommissioned in 1990. There are no known plans to develop a high-seas fleet and to operate in distant waters.

In a recent development, it has been reported that a Belgian company, identified as Lubmain International S.A., has registered, licensed, or chartered 7 Taiwanese vessels using the flag of Honduras.[5] Two Belgian vessels averaging 150.5-GRT obtained licenses to fish in The Gambia's waters between 1985 and 1992. The authors have no further information about this venture and assume that it was an isolated event.

SOURCES

"Belgian Fisheries Review, 1988," *Eurofish Report*, October 26, 1989, p. SP/1.

Monfort, Marie Christine. "All Ready for the Single Market," *Seafood International*, October 1991, p. 55 and "Belgique: L'esprit d'ouverture," *France-Eco Peche*, March 1991, p.25.

Pecher, Charles. Managing Director, Thalassa Seafoods. "Selling Seafood to Europe: EC'92 and Beyond," speech given on April 16-17, 1990 in Seattle, Washington.

Belgium

50 km
North Sea
Oostende
Antwerp
BRUSSELS
Kortrijk
Liège
Mons
Charleroi
Bastogne

Table 1.--BELGIUM. Number of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	555	1	-	-	-	-	555	1
1976	555	1	-	-	-	-	555	1
1977	555	1	-	-	-	-	555	1
1978	555	1	-	-	-	-	555	1
1979	555	1	-	-	-	-	555	1
1980	555	1	-	-	-	-	555	1
1981	555	1	-	-	-	-	555	1
1982	555	1	-	-	-	-	555	1
1983	555	1	-	-	-	-	555	1
1984	555	1	-	-	-	-	555	1
1985	555	1	-	-	-	-	555	1
1986	555	1	-	-	-	-	555	1
1987	555	1	-	-	-	-	555	1
1988	555	1	-	-	-	-	555	1
1989	555	1	-	-	-	-	555	1
1990	555	1[a]	-	-	-	-	555	1
1991	-	-	-	-	-	-	0	0
1992	-	-	-	-	-	-	0	0

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London,UK, various years.

[a] The *John*, a 555.05-GRT vessel based out of Oostende. The ship operated in Icelandic waters under a special fishing agreement negotiated by Belgium. The agreement expired in 1986. The *John* apparently was sold or scrapped in 1990.

Table 2.--BELGIUM. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	22,610	22,663	23,250	23,147	23,798	24,620	25,445	25,498	25,000E	25,000E
Total fishing fleet (Number of vessels)	187	191	188	193	194	195	200	194	190E	190E
High-seas fleet (Number of vessels)	1	1	1	1	1	1	1	1	0	0
High-seas fleet (GRT)	555	555	555	555	555	555	555	555	0	0
Catch (Metric tons)	48,580	47,871	44,621	39,538	40,373	41,767	39,854	41,624	40,226	36,609
Imports (Metric tons)	116,474	110,336	115,787	117,992	138,000	141,109	151,625	167,536	177,040	NA
Exports (Metric Tons)	28,089	27,096	28,564	29,500	37,972	40,661	41,150**	46,113**	42,553	42,000E
Fishermen (Number)	1,274	1,282	1,266	1,258	1,263	1,312	1,271	1,249	1,248	1,200E

(**) = Includes imported product. Source: *L'evolution du Secteur Belge de la Pêche Maritime*en 1990, Conseil Central de l'economie, Commission Consultative Spéciale de la Pêche, Ostende, 1991 (fishing fleet and fishermen), FAO, *Yearbook of Fishery Statistics*, Rome, various years (catch statistics), and *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years (high-seas fleet). (E) = Estimate.

Table 3.--BELGIUM. Fisheries catch by FAO area, 1975, 1980, 1985-91.

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	-	-	-	0.6	0.6	0.7	0.7	0.7	0.8
Coastal[b] (Northeastern Atlantic and Baltic Sea, FAO area 27)	49.0	46.0	45.0	39.0	40.0	41.1	39.0	41.0	39.4
Distant-water	-	-	-	-	-	-	-	-	-
Total	49.0	46.0	45.0	39.6	40.6	41.8	39.7	41.7	40.2

Source: FAO, *Yearbook of Fishery Statistics,* various years.

[b] The distinction between "coastal" and "distant water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea. Belgian fishermen fished off Iceland between 1975 and 1986, for example.

ENDNOTES

1. Charles Pecher, Managing Director, Thalassa Seafoods. "Selling Seafood to Europe: EC'92 and Beyond," speech given on April 16-17, 1990 in Seattle, Washington.

2. OECD, *Draft Review of Fisheries (Belgium)*, Paris, 1992.

3. Marie Christine Monfort, "All Ready for the Single Market," *Seafood International*, October 1991, p. 55 and "Belgique: L'esprit d'ouverture," *France-Eco Peche*, March 1991, p.25.

4. "Belgian Fisheries Review, 1988," *Eurofish Report*, October 26, 1989, p. SP/1.

5. The vessels are the *Chien Hang No. 6* (711-GRT), *Fu Yuan No. 6* (708-GRT), *Fu Yuan No.16* (711-GRT), *Hsin Huang No. 201* (706-GRT), *Tching Ye No. 217* (725-GRT), *Tching Ye No. 236* (726-GRT), and the *Yu I Hsiang No. 617* (708-GRT). The vessels are listed as fishing vessels exceeding 500-GRT registered with the National Mercant Marine of Honduras in 1993. No information is available about these vessels. The vessels are probably tuna longliners.

2.2

DENMARK

The Danish high-seas fleet, according to Danish statistics, included only 14 high-seas vessels; 12 in the 500-999-GRT range and 2 over 1,000-GRT in 1992.[1] *Lloyd's Register* reports that the Danish 1992 fleet included 83 high-seas vessels with a total tonnage of slightly less than 94,000 tons.[2] This fleet fishes from Greenland across the North Sea and into the Baltic Sea. Some fishing takes place off northern Norway and in the Bay of Biscay off France. The Danish fleet is not expected to shift from its traditional North Sea fishing patterns. Approximately 10 Danish vessels attempted to evade strict Danish and international regulations on the harvesting of wild Atlantic salmon by decommissioning their vessels and reflagging their ships in Panama. Danish authorities seized one of these vessels, the *Onkel Sam,* in March 1990, when it stopped at the port of Hirtshals enroute to Poland with its cargo of salmon.

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1. General Background

Denmark is the Community's leading fishing nations, with a catch of nearly 1.9 million tons in 1992.[3] Denmark ranked second after Norway in terms of the total West European catch and 13th in terms of the total world catch of fishery products in 1991. Danish fishermen receive annual quotas, typically for cod, haddock, saithe, herring, and mackerel from the European Community. Denmark's catch is dominated by sandeels (*Ammodytes sp.*) which are caught in prodigious quantities (855,000 tons in 1991) and used mostly to produce fishmeal. Danish fishermen also catch large quantities of Atlantic herring (*Clupea harengus*) and Norway pout (*Trisopterus esmarkii*). Access to European sprat (*Sprattus sprattus*) is limited to vessels under 22 meters. Denmark is a leading European trader in fishery products. Denmark imports large quantities of raw fish and processes this fish into high value seafoods that are exported to markets around the world.[4] Denmark exports were valued at over $2.2 billion in 1992.[5] Denmark's small, aging, fishing fleet is not expected to grow significantly in the future, despite remarkably high catches. Denmark's future requirements for fish and shellfish will increasingly be met by imports of raw products from foreign suppliers. An overview of the Danish fishing industry can be seen in tables 1-6.

2. Fleet Background

The Danish high-seas fleet consisted of fewer than 20 vessels during the decade between 1975 and 1984. Danish statistics show that the high-seas fleet declined to 14 vessels in 1987 and has remained at that level through 1992 (table 3). *Lloyd's Register*, however, reports that the number of high-seas vessels increased to 28 ships in 1985 and that the number increased to 36 vessels in 1986.[6] In 1987, *Lloyd's Register* included high-seas vessels from the Faroe Islands in the Danish fleet statistics, which has, unfortunately, complicated reporting on the high-seas fleets of the Faroe Islands, Greenland and Denmark (table 1).

Danish fishermen fish inside their own national boundaries, in EC waters, in grounds shared with other Nordic countries (the Skagerrak between Denmark and Norway and the Kattegat between Denmark and Sweden), in the Baltic Sea, in waters off the Faroe Islands and Greenland, and in other distant waters (tables 5 and 6). Danish fishermen operating outside the North Sea and Baltic Sea report catches averaging 65,000 tons for the years 1982-90.[7] Denmark's high-seas catch was 47,685 tons in 1991.[8] The bulk of the distantwater catch consists of mackerel species.

The outlook for Denmark's fleet is not good. The EC is continually reducing the Danish quota for important species, such as Atlantic cod,[9] and is demanding further reductions in the size of the Danish fleet.[10] In 1990, for example, the EC reduced the Danish catch by 30,000 tons as part of the EC quota allocation process. The EC in recent years has announced that a reduction of fleet capacity is needed to save some stocks, which is certain to hurt the Danish fishing fleet in the coming years. The Danish fleet declined from 2,749 vessels (111,500-GRT) in 1991 to 2,574 vessels (104,014-GRT) in 1992.[11]

3. Modernization Programs

The Danish fishing fleet is dominated by small side trawlers under 25-GRT[12] with an average age of 30 years, giving Denmark one of the oldest fishing fleets in Europe.[13] Financial assistance is granted to Danish fishermen seeking to modernize their fishing vessels. The amount of assistance can vary from 10 to 25 percent of the cost of improvements. The Royal Danish Fisheries Bank offers loans up to 70 percent of the construction cost of new fishing vessels and up to 60 percent of the cost of second hand vessels. Interest rates for the loans correspond to the market rate of interest and repayment is scheduled over 10 to 20 years. In 1990, the Royal Danish Fisheries Bank issued $34 million worth of loans for upgrading fishing vessels.[14] Denmark provides financial aid for exploratory fishing, with the goal of developing alternative fishing or of discovering new fishing grounds. In some instances, the Government also encourages fishermen to invest in fish farming.

4. Decommissioning Programs

The Government of Denmark provides financial assistance to fishermen seeking to permanently withdraw vessels from Denmark's fishing fleet. The payment of assistance is subject to controls enacted by the European Community pursuant to Council Regulation (EEC) No. 4028/86 and No. 3944/90. The Government of Denmark supports withdrawal programs because it contributes to improving the profitability of the fishing industry and to the reduction of overfishing. There are too many boats chasing too few fish.[15] This is especially true for cod, which has been overfished in recent years. There are regulations in Denmark which control the construction of new fishing vessels to restrict the growth of the fishing fleet. Denmark also seeks to ensure a geographic spread of fishing vessels, by size and location, to avoid concentrations in any one area.

The main elements of the Danish program to reduce the size of its fishing fleet are EC regulations which allow entry of vessels of the same capacity to replace vessels withdrawn from the fleet and which call for the gradual reduction of the Danish fishing fleet. In implementing the EC directives, grants are available for the permanent withdrawal of vessels from fisheries within EC waters. Denmark appropriated a total of $6 million between 1984 and 1986 and $45 million for the years 1987-91. The Danish fishing fleet has been reduced by approximately 7 percent, from 136,000-GRT in 1987 to 119,000-GRT in 1990.[16] The authors attribute this reduction to the EC fleet reduction program.[17] Danish officials report spending $64.3 million to scrap 436 vessels (21,306-GRT) between 1987 and 1991 as part of Denmark's decommissioning program (table 4).[18]

5. Shipyards

Danish shipyards have a reputation for quality. Curiously, many of Denmark's vessels are built for overseas customers. Only a few are built for Danish fishermen. Danish shipyards began relying on orders from Greenland, Norway, and Sweden, in the absence of domestic orders, in 1988, according to *Fishing News International*.[19] The article noted that low cost loans and the skill of the shipyards began attracting foreign customers as early as 1986. The situation had not changed significantly by 1990. Despite good performance and improved prospects, very few fishing vessels were built. In 1990, for example, Danish shipyards built only 1 fishing vessel,[20] a shrimp trawler for a company in Greenland, out of a total of 25 vessels totaling 387,000 GRT worth $1.1 billion. Two years later the situation still had not changed appreciably. The Johs. Kristensen Skibsbyggeri AS shipyards built 2 ships in 1992 for Danish fishermen: the *Krae Frihed,* a 51-GRT netter and the *Arkona*, a 49-GRT beam trawler.[21] It is significant that these vessels are fairly small and are not likely to fish in distant grounds. Shipbuilding in Denmark is not in a growth mode and no major fishery projects are currently anticipated.

6. International Agreements

Denmark is an EC member state and responsibility for negotiations on fishery issues belongs to the EC in Brussels. Denmark has, however, concluded fishery agreements with Norway and Sweden, within the framework of the Common Fisheries Policy, concerning fishing in the Skagerak and Kattegat. The agreement assigns quotas for fishing in these narrow areas among the 3 countries.

Sweden and the Soviet Union began negotiating an agreement to divide the "white zone" in the Baltic Sea between the 2 countries in 1988. Danish fishermen fished in the "white zone" for many years in the absence of an agreement between Sweden and the Soviet Union. Aware that they would soon lose access to this important fishing zone, the Danes pressured the EC to initiate negotiations with the Soviet Union. EC negotiators met with Soviet officials on September 8-9, 1988, in the first talks since 1977, when the EC extended its fishery boundaries. Sweden and the Soviet Union signed a joint protocol on December 12, 1988, dividing the "white zone" between the 2 countries, thus ending years of conflict and shutting Danish fishermen out of this fishing zone. The dissolution of the Soviet Union and the reestablishment of Latvia, Estonia, and Lithuania as independent states has produced 4 separate bilateral fishery agreements in the area.[22] Discussions between the EC and Russia have not yet produced an agreement.[23]

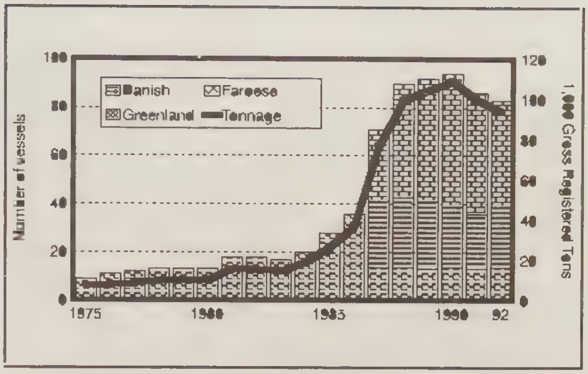

Figure 1. Danish high-seas fleet, 1975-92.

Danish negotiators also held talks with officials of the German Democratic Republic which resulted in an agreement signed on September 14, 1988. The agreement recognized Danish sovereignty over waters around the island of Bornholm. The agreement, which entered into force on June 14, 1989, divided the Continental Shelf and fishing zones between the 2 countries. The status of this agreement, following German unification, is not clear.

Denmark has an unusual relationship with the Faroe Islands and Greenland. Denmark is responsible for conducting international fishery negotiations on behalf of the Home Rule Governments of both the Faroe Islands and Greenland. The European Community is responsible for negotiating all international fishery agreements affecting Danish fishermen, including fishery agreements with the Faroe Islands and Greenland. This places Denmark in the unique position of seeking to expand access for EC fishermen (i.e., Danish fishermen) in waters off Greenland or the Faroe Islands, while, at the same time being responsible for negotiating reduced EC fishing in these same waters.

7. Fleet Dispersal Plans

It is likely that the Danish fleet will be slowly reduced in the next few years and that Danish importers will increasingly turn to foreign suppliers (including the Russians) for sources of fish. Trade, not fleet dispersal, appears to hold the key to Denmark's future in fisheries. Denmark is expected to reduce its fleet gradually.[24] This will mostly impact the small vessels that comprise the bulk of the fleet. The opportunities for improved quotas in the North Sea and in the area off Denmark are not good. EC authorities have suggested that reductions of up to 40 percent may be necessary to rebuild overfished whitefish stocks. Some Danish fishermen have sought opportunities to fish in distant ports as part of the EC program to open up access throughout the world. It is unlikely, however, that this will be a trend in the future.

Despite the authors view that Danish fishermen are unlikely to seek opportunties to fish in distant waters, it should be noted, that at least 10 Danish fishermen were involved in an attempt to evade tough Danish regulations governing the harvest of wild Atlantic salmon by reflagging their vessels in Panama.[25] One of the vessels was the *Onkel Sam* (109.30-GRT and built in 1985). The vessel was decommissioned by the EC on July 19, 1988. The owner of the *Onkel Sam* registered the ship in Panama which is not a party to the North Atlantic Salmon Conservation Organization (NASCO). Denmark, together with many other North Atlantic countries, belongs to NASCO and abides by the regulations designed to conserve and protect stocks of wild salmon. Panama was not a member of NASCO, and thus Panamanian-flag vessels could legally fish for wild Atlantic salmon on the high-seas.[26] Danish authorities seized the *Onkel Sam* in March 1990, when it stopped at the port of Hirtshals enroute to Poland.[27] Denmark acted because the NASCO convention prohibits the transportation or landing of wild Atlantic salmon by member states.[28] The *Onkel Sam* was carrying 20 tons of Atlantic salmon when it was seized.[29] An investigation into the case was referred to EC courts and is currently being considered by Danish courts.[30] Additional investigations implicated 6 to 10 Danish fishermen who were fined for similar illegal fishing.[31] The loophole that allowed some vessels to legally fish for Atlantic salmon was closed when the Government of Panama restricted fishing for salmon by vessels flying the Panamanian flag.[32]

The Danish Government's record of compliance with EC and other international bodies has, of course, nothing to do with the activities of a few individuals. The attempt to harvest Atlantic salmon is an example of a *few* fishermen facing bankruptcy who exploited other means of generating income. The impact of the activities by a few individuals has had only a minimal impact on the Danish fishing fleet. The involvement of a few Danish fishermen in reflagging or illegal salmon fishing was difficult for the Danish Government, which prides itself on its record of compliance with the EC, NASCO, and other international bodies. The prompt action by the Danish Government to investigate and prosecute these cases, and to impose fines or penalties, demonstrates Denmark's continued adherence to international principles governing the conservation of living marine resources.

SOURCES

"Danish shipyards rely on exports," *Fishing News International*, January 1989.

"Denmark: European leader in fishing," Spécial Danemark, *Le Marin*, May 1992, p. 7.

Eurofish Report, various issues.

Fiskeriministeriet, *Yearbook of fishery statistics, Denmark, 1991*, Danish Ministry of Fisheries, Copenhagen, January 1993.

Folsom, *William, B. Danish Fisheries, 1988*, International Fisheries Report (IFR-89/89), Office of International Affairs, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, September 29, 1989.

Hansen, Søren. Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark fax message dated August 10, 1993 and other reports.

Hulgaard, Erling. Danish Ministry of Fisheries, letter dated June 10, 1993.

Moustgaard, Poul. "Less fish for growing markets," *Seafood International*, March 1990, p. 22.

Parker, Peggy. "DENMARK: Flexibility is Key to Success," *Seafood Business*, July/August 1988, p.69.

REVIEW: The Danish Fishery Sector, 1992, Ministry of Fisheries, Copenhagen, Denmark, June 1993, p. 9.

REVIEW: The Danish Fishery Sector, 1990, Ministry of Fisheries, Copenhagen, July 1991, p. 7.

Urch, Mike."DENMARK: Europe's No 1 exporter," *Seafood International*, March 1991, p. 27.

U.S. Consulate General, Edinburg, Scotland.

U.S. Embassy, Copenhagen, Denmark, various reports.

U.S. Embassy, Panama City, various reports.
World Fishing, various issues.

Denmark

Skagerrak
100 km
Skagen
Faroe Islands and Greenland are separate entries
Ålborg
Kattegat
Århus
Esbjerg
COPENHAGEN
Sjælland
Fyn
Odense
Bornholm
Åbenrå
Møn
Baltic Sea
Lolland
Falster

Table 1.--DENMARK. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	6,340	9	1,500	-	-	-	7,840	9
1976	6,840	10	1,500	1	-	-	8,340	11
1977	7,690	11	1,500	1	-	-	9,190	12
1978	8,411	12	1,500	1	-	-	9,911	13
1979	8,751	12	1,500	1	-	-	10,251	13
1980	8,751	12	1,500	1	-	-	10,251	13
1981	12,081	16	1,021	1	2,483	1	15,585	18
1982	12,155	16	1,021	1	2,483	1	15,659	18
1983	11,111	15	1,021	1	2,483	1	14,615	17
1984	11,835	16	4,477	3	2,483	1	18,795	20
1985	15,963	21	8,377	6	2,483	1	26,823	28
1986	18,351	25	10,468	8	8,054	3	36,873	36
1987	34,819	47	23,623	17	18,330	7	76,772	71[a]
1988	39,927	55	34,672	25	25,218	10	99,817	90
1989	39,776	55	33,693	24	30,823	13	104,292	92
1990	41,436	57	31,899	22	35,695	15	109,030	94
1991	35,925	49	33,122	24	31,116	13	100,163	86
1992	35,455	50	27,285	20	31,116	13	93,856	83

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years. Note: Includes Faroese fishing vessels after 1987.

[a] Includes vessels from the Faroe Islands beginning in 1987 as depicted in the shaded area.

Table 2.--DENMARK. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch and trade in metric tons and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	118,969	112,866	129,082	132,596	131,732	121,765	117,742	114,142	111,500	104,014
Total fishing fleet (number)	3,321	3,307	3,301	3,265	3,228	3,027	2,924	2,830	2,749	2,574
Total fleet engine power (in kilowatts)	508,028	522,866	544,199	565,625	567,073	537,829	523,555	505,562	484,937	475,000E
High-seas fleet (number)	17	20	28	36	71[b]	90	92	94	86	83
High-seas fleet (GRT)	14,615	18,795	26,823	36,873	76,772	99,817	104,292	109,030	100,163	93,856
Catch (Metric Tons)	1,862,127	1,847,773	1,764,827	1,848,672	1,706,383	1,971,834	1,927,493	1,517,211	1,793,171	1,929,710
High-seas catch[c] (Metric Tons)	62,115	54,349	60,525	60,525	79,148	55,922	87,431	54,961	47,684	50,000E
Imports, by quantity	360,186	454,599	452,967	491,655	506,353	556,530	616,416	610,823	632,074	782,718
Exports, by quantity	773,460	809,175	809,577	807,774	747,681	797,348	764,990	733,998	880,966	915,236
Exports (1 billion kroner)	8.5	9.4	10.2	11.3	12.0	12.5	12.8	13.4	14.7	13.9
Exports (US$ billion)	0.9	0.9	1.0	1.4	1.9	1.9	1.9	2.4	2.5	2.2
Fishermen (Number)	14,500	14,500	10,000E	9,000	9,000E	7,642	7,323	7,000E	7,000E	7,000E

(E) = Estimate Sources: Fiskeriministeriet, Yearbook of fishery statistics, Denmark, 1991, The Ministry of Fisheries, Copenhagen, January 1993 (for total fleet statistics and for distant-water catch). FAO, *Yearbook of Fishery Statistics*, Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years. *REVIEW: The Danish Fishery Sector, 1992*, Ministry of Fisheries, Copenhagen, Denmark, June 1993 (data for 1992).

[b] Includes vessels from the Faroe Islands beginning in 1987.

[c] Distantwaters refers to fishing areas outside the North Sea and Baltic.

Table 3.--DENMARK. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1987-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1987	7,247	11	2,117	2	3,090	1	12,454	14
1988	7,260	11	2,117	2	3,090	1	12,467	14
1989	7,260	11	1,095	1	3,090	1	11,445	13
1990	7,296	11	2,111	2	3,090	1	12,497	14
1991	7,278	11	2,111	2	-	-	9,389	13
1992	8,034	12	2,111	2	-	-	10,145	14

Source: Erling Hulgaard, Danish Ministry of Fisheries, letter dated June 10, 1993. Note: These statistics do NOT include Faroese or Greenlandic fishing vessels.

Table 4.--DENMARK. Number of fishing vessels scrapped with capacity reduction subsidies, 1987-91.

Year	Vessels	Tonnage	Danish subsidy	
			Danish kroner	US dollars
	No.	GRT	Million kroner	US$1 Million
1987	47	1,518	27.9	4.4
1988	161	7,786	147.9	22.2
1989	89	3,793	71.5	10.4
1990	68	4,091	66.0	11.6
1991	71	4,118	100.3	15.7
5-Year total	436	21,306	413.6	64.3

Source: Fiskeriministeriet, *Yearbook of fishery statistics, Denmark, 1991,* Ministry of Fisheries, Copenhagen, 1993, p. 33.

Table 5.--DENMARK. Catch, by fishing area, 1991.

Fishing grounds	Catch
	Metric tons
North Sea	1,228,631
Skagerrak	182,732
Kattegat	62,210
Ringkøbing & Nissum	847
Liimfiord	110,617
Western Baltic	39,289
Øresund	4,264
Eastern Baltic	73,803
Isefjorden	554
Norwegian Sea	1,077
Barents Sea	275
Faroes Islands	4,635
Western Scotland	4,354
English Channel	30,352
Southwest Ireland	3,428
Bay of Biscay	1,349
Eastern Greenland	339
Western Greenland	216
Other	1,659
Total	1,750,631

Source: Fiskeriministeriet, *Yearbook of fishery statistics, Denmark, 1991,* Ministry of Fisheries, Copenhagen, 1993, pp. 47-50.

Note: Fishing grounds shown in the shaded areas are considered "distantwaters" according to Danish statistics.

Table 6.--DENMARK. Fisheries catch by FAO area, 1975, 1980, 1985-91.

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
nland FAO area 05)	16.4	18.2	22.0	21.1	23.2	24.0	27.0	36.0	36.5
oastal[d] Northeastern Atlantic and altic Sea, FAO area 27)	1,749.1	2,009.2	1,742.4	1,827.0	1,683.0	1,948.0	1,900.3	1,481.0	1,755.0
istant-water[e] Northwestern Atlantic, AO area 21)	2.0	.9	.4	.6	.4	.3	.3	.3	1.9
otal	1,767.5	2,028.3	1,764.8	1,848.7	1,706.6	1,972.3	1,927.6	1,517.3	1,793.4

rce: FAO, *Yearbook of Fishery Statistics,* various years.

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[d] The distinction between "coastal" and "distantwater" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

[e] Western Greenland.

ENDNOTES

1. Erling Hulgaard, Danish Ministry of Fisheries, letter dated June 10, 1993 and Fiskeriministeriet, *Yearbook of fishery statistics, Denmark, 1991*, Danish Ministry of Fisheries, Copenhagen, January 1993.

2. *Lloyd's Register* for Denmark include statistics for Greenland's fishing fleet and the fishing fleet of the Faroe Islands after 1987. This has resulted in some confusion when attempting to properly identify the size of the Danish, Faroese, and Greenlandic fishing fleets.

3. *REVIEW: The Danish Fishery Sector, 1992,* Ministry of Fisheries, Copenhagen, Denmark, June 1993, p. 9.

4. Peggy Parker, "DENMARK: Flexibility is Key to Success," *Seafood Business*, July/August 1988, p.69.

5. *REVIEW: The Danish Fishery Sector, 1992,* Ministry of Fisheries, Copenhagen, Denmark, June 1993, p. 10.

6. The authors suspect that the increase was attributed to the growth of Greenland's fishing fleet which is thought to be included in the *Lloyd's Register* for Denmark.

7. Fiskeriministeriet, *Yearbook of fishery statistics, Denmark, 1991,* Ministry of Fisheries, Copenhagen, 1993, p. 168. Denmark defines "distant-waters" as all fishing areas outside the North Sea and the Baltic.

8. Fiskeriministeriet, *Yearbook of fishery statistics, Denmark, 1991,* Ministry of Fisheries, Copenhagen, 1993, p. 60.

9. Mike Urch, "DENMARK: Europe's No 1 exporter," *Seafood International*, March 1991, p. 27.

10. Poul Moustgaard, "Less fish for growing markets," *Seafood International*, March 1990, p. 22.

11. *REVIEW: The Danish Fishery Sector, 1992,* Ministry of Fisheries, Copenhagen, Denmark, June 1993, p. 18.

12. *REVIEW: The Danish Fishery Sector, 1990,* Ministry of Fisheries, Copenhagen, July 1991, p. 7.

13. "Denmark: European leader in fishing," Spécial Danemark, *Le Marin*, May 1992, p. 7.

14. *REVIEW: The Danish Fishery Sector, 1990,* Ministry of Fisheries, Copenhagen, July 1991.

15. "Denmark: European leader in fishing," Spécial Danemark, *Le Marin*, May 1992, p. 7.

16. *REVIEW: The Danish Fishery Sector, 1990,* Ministry of Fisheries, Copenhagen, July 1991, p. 6.

17. William, B. Folsom, *Danish Fisheries, 1988*, International Fisheries Report (IFR-89/89), Office of International Affairs, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, September 29, 1989.

18. Fiskeriministeriet, *Yearbook of fishery statistics, Denmark, 1991,* Ministry of Fisheries, Copenhagen, 1993, p. 33.

19. "Danish shipyards rely on exports," *Fishing News International*, January 1989.

20. U.S. Embassy, Copenhagen, March 14, 1991.

21. "1992 Fishing vessel completions," *World Fishing*, March 1993, p.50.

22. The 4 agreements are between Sweden and Estonia, Latvia, Lithuania, and Russia.

23. Discussions over a fisheries agreement with Russia were still being considered by the EC Council in July 1993 with many issues remaining to be settled. *Eurofish Report*, July 1, 1993, p. BB/4.

24. "The Future of the North Sea," *Dana, A Journal of Fisheries and Marine Research*, Volume 8, The Danish Institute for Fisheries and Marine Research, Charlottenlund, 1989.

25. The U.S. Embassy in Copenhagen noted that depressed conditions led a number of Danish fishing vessels, mostly from the island of Bornholm, to register their vessels under foreign flags. This was done to take advantage of underutilized fishing quotas or to fish for species protected by international conventions, such as Atlantic salmon. "Economic indicators for Denmark," U.S. Embassy, Copenhagen, March 13, 1990.

26. Panama was not a signatory to the NASCO treaties limiting the fishing for Atlantic salmon in the North Atlantic and therefore vessels flying the Panamanian flag were not fishing illegally. There was no way under the NASCO terms to control the take of Atlantic salmon by Panamanian vessels. "Salmon fishing by Panamanian-flag vessels," U.S. Consulate General, Edinburgh, January 30, 1991.

27. Poland was also not a signatory to the NASCO accords. The catch was being sold for consumption by international hotels in Poland. Other reports indicated that a portion of the catch was being shipped to West Germany. "Economic indicators for Denmark," U.S. Embassy, Copenhagen, March 13, 1990 and "Danes found guilty of evading salmon restrictions in Panama," *Eurofish Report*, September 28, 1989, p. FS/2.

28. "Economic Indicators for Denmark," U.S. Embassy, Copenhagen, March 13, 1990.

29. "Economic indicators for Denmark," U.S. Embassy, Copenhagen, March 13, 1990.

30. The U.S. Embassy in Copenhagen reported that the Danish case against the *Onkel Sam* was referred to the EC Court which in late 1992 ruled that, although the vessel perhaps violated EC law, the fact that it was legally a Panamanian vessel, ruled out an EC court case. The case is now back in Danish courts and a final ruling in pending. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark fax message dated August 10, 1993.

31. A Danish investigation revealed that 3 fishermen leased their vessels to a Panamanian company they created, Ocean Food Corporation. That company sold the catch of Atlantic salmon to Interfish of Cuxhaven, West Germany. Interfish was owned by a Danish-born fish exporter. "Danes found guilty of evading salmon restrictions in Panama," *Eurofish Report*, September 28, 1989, p. FS/2. The U.S. Embassy notes that these cases involved a few fishermen facing bankruptcy and did not represent the actions of the Danish fishing fleet as a whole. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark fax message dated August 10, 1993.

32. "Salmon fishing by Panamanian-flag vessels," U.S. Embassy, Panama City, Panama, January 31, 1991.

2.3

FRANCE

The French high-seas fleet has remained fairly constant for well over a decade. The high-seas fleet, according to French statistics, included 153 vessels with a capacity of 77,982 Gross Registered tons (GRT) on January 1, 1993.[1] The French high-seas fishing fleet included 10 large stern trawlers (*grande pêche chalutiere*), 34 tuna vessels (*grande pêche thonière*), and 109 trawler/seiner vessels (*pêche hauturière*).[2] The French high-seas tuna fleet operates off West Africa and in the Indian Ocean while most of the trawler/seiner fleet operates off the coast of Africa. The future of the French high-seas fleet is uncertain; the high-seas fleet (those vessels over 500-GRT) declined from 106 vessels in 1976 to 85 vessels in 1986, but has since increased to 92 vessels. Most French vessels operate in areas where the EC has established a bilateral fisheries agreement. One venture in Vietnamese waters failed and the *Commandant Gué*, a large factory stern trawler that once fished off Newfoundland, returned to France. Six French vessels were reflagged in Panama, 3 French-owned vessels were reflagged in St. Vincent, and 2 vessels were reflagged in Cyprus in 1993.

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1. General Background

France plays a substantial role in the European fishing industry, possessing 7,200 vessels during 1992, registering 187,000 GRT.[3] Its annual catch peaked at 910,000 tons in 1989 and then declined to 813,000 tons in 1991. Despite a sizeable catch, French importers purchased 508,000 tons of fish and shellfish worth $1.9 billion.[4] Approximately 60-percent of these imports came from European countries, with EC members providing 38 percent of France's 1992 fishery imports.[5] France, with a population of nearly 56 million is an important market for fishery products and premium prices are paid for fresh seafoods. This has helped the French fishing industry to develop one of the more important fishing industries in Western Europe.

After its total destruction in the Second World War, the French fishing industry quickly rebounded in the 1950's and 1960's, before slowing down in the face of international competition and the extension of

Exclusive Economic Zones (EEZ) by many nations around the world in the mid-1970s.

The Government of France has always been deeply involved in the fishery. Fishermen, like farmers, constitute an important political interest group (there were nearly 23,000 registered fishermen in France in 1992), and have proven willing to carry out acts of civil disobedience such as blockading ports and destroying imported fish on the docks, as happened in Boulogne in March 1993. As has been the case for most EC fishermen, the French have resisted many aspects of the Common Fisheries Policy (CFP), especially those which allow vessels of one member state to fish in the waters of another while restricting overall fishing effort. France has provided several types of income support and subsidies for fishing operations, often incurring the wrath of European Community partners such as the United Kingdom and Spain.

France is a major player on the world fishing scene. It maintained 90 to 153 distant-water vessels in 1992-93.[6] French vessels are able to fish anywhere in the world, but they focus their high-seas efforts in the northeast Atlantic, the western Indian Ocean, the eastern central Atlantic, and in the Mediterranean. The principal species in the French highseas fisheries include tunas, saithe, whiting, hake, anglerfish, cuttlefish and squid, and lobsters.

2. Fleet Background

French policies regulating the fishing fleet are rooted in the aftermath of the Second World War. Much of the French fleet was damaged or destroyed during the war. Subsequently, the French Government offered subsidies and other incentives to encourage the restoration of the fishing fleet. Between 1945 and 1952 construction of large-scale vessels was given priority, encouraged by low-interest loans guaranteed by the state.[7] By 1953, the fishing capacity of the French fleet had increased tremendously.[8] French planners began to worry by the end of the 1950s, that capacity was outstripping the available resources. As a result, there was a series of plans to reduce size of the fleet and/or modernize the fleet during the 1960s. Improved technology resulted in increased fishing productivity per vessel, but landings continued to decline. At the same time, international competition for fish stocks was intensifying.

Between 1966 and 1975 French fishery administrators became conscious of international competition. They reacted to this perceived threat by shifting away from their previous conservation policy and encouraging large-scale fishing enterprises. The French Government believed that large enterprises were best able to take advantage of technological innovations in distant-water fisheries, which represented at the time over half of all French landings.[9] New subsidy programs, resulted in the purchase of new stern trawlers in the early 1970s. The plans for fleet expansion, however, were disrupted by an oil crisis in 1973, which caused fuel prices to double while ex-vessel prices slumped.[10]

The next major development in the French fishery was the declaration of 200-mile exclusive economic zones by many nations in 1977. The EC also announced a 200-mile limit, extending its jurisdiction over much of the North Atlantic. Within EC waters, new quota systems were implemented to lessen competition among EC fleets. It was around this time that a "subsidy war" among EC member states began. Although productivity as measured in terms of catch per vessel rose over this period, vessel operators continued to lose money as fuel costs rose due to the 1979-80 oil crisis. Member states offered subsidies both for vessel construction (the self-finance proportion fell to 10%) and for fuel purchases. Meanwhile, the focus of the French fleet renewal policy shifted to small-scale ("artisanal" or inshore) fisheries.[11] One initiative went so far as to promote sail-powered fishing vessels, which would not require fuel.[12] The 1981-82 recession in Europe increased political pressure to expand subsidy programs in the name of "social peace," as fear of bankruptcies and unemployment in the fishing sector grew.[13]

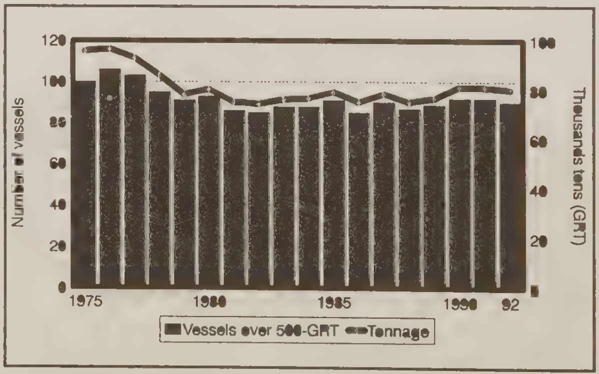

Figure 1.--The French high-seas fleet, 1975-92.

The EC introduced its Common Fisheries Policy in 1983 after seven years of negotiations. At the center of the CFP was a plan to reduce the capacity of the EC fleet. The large French fleet quickly became one of the prime targets of this plan. In just three years (1985 to 1988) the French fleet fell from 14,008 vessels to 8,991 vessels. Since the introduction of the CFP the French fishing industry has operated under an atmosphere of crisis. Problems facing the French industry are not that unlike those around the world: overcapacity, depleted stocks, over-harvesting of juvenile fish, arguments over the proper mesh size on fishing nets, and the management of quotas.[14] Low catches in France have also led to increased amounts of seafood imports, as the French catch provides barely half the total amount consumed.[15] France has one of the highest seafood consumption levels in Europe; the average Frenchman eats over 25 kilograms of fish per year, and over 85 percent of all French households eat seafood at least twice a week.[16]

3. Modernization Programs[17]

The French government provides financial assistance to French fishermen through a system of loans and subsidies designed to promote the modernization of the French fleet and to encourage investment in fishing equipment and fishing-related activities. This government support system was launched in 1983 and modified in 1986 to introduce into French law the EC Directive on Aid to Fishing No. 4028/86. These aid schemes concern non-commercial and commercial fishing as well as related investment on land.

A. Aid program for non-commercial fishing:

1. *Subsidies:* These subsidies apply to the building or the "substantial" transformation of vessels of or above 16 meters (if registered in one of the fishing ports along the North Sea, the Channel or the Atlantic Ocean), and of or above 18 meters (if registered in one of the fishing ports along the Mediterranean). In order to be eligible for this type of subsidy, fishermen may not own more than one vessel, whether individually or collectively.

For the building of a new vessel, the subsidy may not exceed 10 percent of the cost of the original investment as determined by one of the regional commissions for the modernization and development of the non-commercial fishing fleet and of marine culture, COREMODE (Commission régionale de modernisation et dévelopement de la flotte de pêche artisanale et des cultures marines), on the basis of the preliminary contract order. This subsidy should also fall within the yearly limit set by the Ministry of the Sea and based on the average cost of 24-meter vessels subsidized during the previous year.

As for the "substantial transformation" of a vessel, the subsidy is limited to 50 percent of the value of a new vessel of the same type, under the supervision of COREMODE, and on the basis of costs appearing on the preliminary contract. In order for regional subsidies to become applicable, these "substantial transformations" must concern a limited number of operations, including a change of propeller, the installation of permanent fishing equipment or of a refrigeration or freezing section. The vessel must be between five and fifteen years old.

2. *Loans*: Subsidized loans are extended to French fishermen by regional maritime savings banks (Caisses régionales de credit maritime mutuel) for the construction of vessels, the purchasing of second-hand vessels less than 15 years old, and the acquisition of basic fishing equipment. They are based on the level of investment, excluding national, regional and EC subsidies. However, the total level of aid from the French government and the EC subsidies may not exceed levels set by the EC.

The interest rate is set at 5 percent with a 3 to 10-year term depending on the purpose of the loan:

■ for the construction of vessels equal to or above 12 meters, the loan may not exceed:

☐ 92 percent, in the case of a fisherman who is less than 40 years old and who has never fully owned another fishing vessel;

☐ 66 percent, in other cases, with a 12-year term.

■ for the construction of vessels less than 12 meters long, including trawlers, the loan cannot exceed:

□ 50 percent, in the case of a fisherman who is less than 40 years old and who has never fully owned another fishing vessel;

□ 20 percent, in other cases, with a 7-year term.

■ for the substantial transformation of vessels less than 15 years of age and 12 meters or longer, the loan cannot exceed:

□ 75 percent, in the case of a fisherman who is less than 40 years old when the transformations are on a newly-acquired vessel;

□ 50 percent in other cases, with a 7-year term.

■ for the acquisition of second-hand vessels less than 15 years old, with a length greater or equal to 12 meters, the loan cannot exceed:

□ 75 percent, in the case of a fisherman who is less than 40 years old and who has never fully owned another fishing vessel;

□ 20 percent, in other cases, with a 10-year term.

■ for the acquisition of second-hand vessels less than 12 meters long, excluding trawlers, the loan cannot exceed:

□ 30 percent, in all cases, with a 9-year term.

■ for basic fishing equipment, the loan cannot exceed:

□ 30 percent, in all cases, with a 3-year term.

B. Aid program for commercial fishing:

1. *Subsidies*: These subsidies apply to investment exceeding the limits set for non-commercial fishing and related to the building or the "substantial transformation" of vessels and the acquisition of equipment designed to improve the profitability of these vessels, such as electronic, fishing, or fish-processing equipment.

Subsidy levels are set between 22 and 30 percent of investment costs, depending on the length of the vessel.

2. *Loans:* Subsidized loans are intended for equipment designed to build a new vessel or transform a vessel. In the case of transformation, the cost of the project must represent at least 20 percent of the initial price of the vessel. The loans only cover 60 percent of the investment.

C. Aid program for investment on land:

1. *Subsidies*: These subsidies are granted for investments related to equipment for storage, fish-processing, etc. They may not exceed 25 percent of the investment and must fall within EC guidelines.

2. *Loans*: Subsidized loans, with a 5 percent interest rate and a 12-year term, are also extended for "movable" and "immovable" equipment. These loans may not exceed 85 percent of the total cost of the investment for "priority" equipment related to refrigeration, cold chambers, etc. For other equipment, the loans may not exceed 30 percent of the investment.

Another recent initiative has been the 1988 decision of the Comité central des pêches maritimes (CCPM) to require permits for the construction or activation of fishing vessels. Permits have become necessary for any reworking or improvement of vessels as well. The CCPM uses criteria based upon the Multi-annual Guidance Program for its decisions in individual cases.[18]

Another area of government emphasis has been in cooperative applied research for deep-sea technology development. The Eureka Program, run in conjunction with Spain and Iceland, has led to the development of exploration devices which can locate and count the maximum numbers of profitable species while reducing the total amount of fuel used in their capture through variable-speed propellers and anti-barnacle paint.[19]

4. Decommissioning Programs

The most recent decommissioning program was the Mellick Plan, named after the former French Minister of the Sea, Jacques Mellick. The French government carried out this initiative through December 1991, offering payments to the owners of vessels which were destroyed or sold outside the EC. The program was successful, as on January 2, 1992, the capacity stood at 1,057,680 kilowatts (kw).[20] The social impact of the Mellick Plan is yet to be appreciated, though hundreds of jobs were lost in the industry, especially in coastal regions, whose fleets harvested juvenile fish. As of July 1993, there are no government initiatives in France explicitly designed to reduce the fishing fleet.[21]

The EC's Multi-annual Guidance Program dating back to December 1987, mandated that French capacity decline to 1,055,000 kw by January 1, 1992, failing which France would forfeit EC fleet modernization assistance. Efforts by the French government to reduce the size of the French fleet have been successful; the capacity of the fleet was only 2,680 kw above the EC MAGP standard on January 2, 1992.

5. Shipyards

As recently as ten years ago, France boasted of dozens of shipyards producing vessels for French and foreign commercial operators. However, the French shipbuilding industry has since been in decline, and the fifteen major shipyards of 1983 have since been reduced to one (Chantier de l'Atlantique), which does not build fishing vessels.[22] Other medium-sized shipyards like La Société Nouvelle des Ateliers et Chantiers concentrate on other sectors of shipbuilding while turning out the occasional fishing vessel. The largest yard concentrating on the fishing sector is the Leroux and Lotz group, most of whose fishing vessels are delivered to French concerns. In 1991, Leroux and Lotz delivered two 82-meter tuna freezer purse seiners which now operate as part of the French fleet.[23]

Other French shipyards producing fishing vessels include Ateliers et Chantiers de la Manche (ACM), whose fishing vessels enjoy a Europe-wide reputation.[24] ACM maintains two shipyards, one in Dieppe along the English Channel, the other in St. Malo along the Atlantic coast. Chantiers Benetau of St. Hilaire de Riez also does a thriving business in fishing vessels. Since 1988, Benetau has been concentrating upon foreign orders, with Cameroon as a prominent customer.[25]

6. International Agreements

As a member of the European Community, French fisheries policy is now subordinate to the Common Fisheries Policy. The Community is also responsible for international fishery relations. France is thus a participant in all EC bilateral and multilateral accords. Its vessels are entitled to harvest in areas opened to the EC as a whole.

France is active in a number of regional bodies which control access to a number of fishing grounds, such as the South Pacific.[26] France also maintains a separate 1972 fisheries treaty with Canada which governs the activities of French vessels based in St. Pierre and Miquelon in Canadian Atlantic waters. French flagged vessels are entitled to quotas in these waters, though relations with Canada have been strained due to allegations of overfishing by St. Pierre vessels. France is also prominent in shrimp fishing in French Guiana in South America and is involved in the fisheries of several Pacific island nations, many of which were once French territories.

7. Fleet Dispersal Plans

French owners of the *Commandant Gué*, a large factory stern trawler that once fished off Newfoundland, attempted to use the vessel as a floating factoryship to support catches made by Vietnamese vessels inside Vietnam's 200 mile limit.[27] The operation apparently did not succeed and the *Commandant Gué* has since returned to France. The owners previously unsuccessfully attempted to use the vessel to process blue whiting into surimi in the north Atlantic. The vessel might be reconfigured and sent out to fish off Argentina on a trial basis, since it is one of the few very large trawlers left in the French high-seas fleet. The number of super-trawlers declined from 3 vessels in 1991 to 2 vessels averaging 2,425-GRT in 1992.

French trawlers are also involved in many of the countries where EC vessels are permitted to fish under bilateral agreements negotiated by the EC. These include many shrimp trawlers, lobster boats, vessels specialized in catching cephalopodes, and freezer trawlers harvesting fresh fish. Most of these trawlers are thought to be under 1,000-GRT in capacity.

The most dynamic sector of the high-seas fleet is the French tuna fleet, which consists of 34 high-seas tuna seiners,[28] mostly in the 1,600-GRT range. These vessels operate in both the Atlantic and Indian Oceans and consist of very modern, very efficient tuna seiners. It is logical to assume that some of these vessels might seek fishing grounds in the Pacific Ocean if catches begin to decline in their traditional fishing grounds.[29]

A total of 11 French vessels reportedly were reflagged in 1993 (table 4).[30] Six were reflagged in Panama, 3 were reflagged in St. Vincent, and 2 were reflagged in Cyprus. The French vessels reflagged in Panama include a few old trawlers and some tuna vessels built in 1981. The vessels registered in Cyprus includes one small, old vessel and one 442-GRT vessel built in 1972 (table 4).

SOURCES

"Catches Inadequate: France to Build Strong Industry," *Irish Skipper*, October, 1991.

"Enquête," *France Éco-Pêche*, June 1991

État de la Flotte, 1993, *GERMES*, Problèmes Économiques Commerciaux et Humains des Entreprises de Pêche, Union des Armateurs à la Pêche de France, Paris, June 1993

Eurofish Report, various issues.

Fishing News International, various issues.

France Pêche, various issues

French Advances in Science and Technology, Winter 1988, p. 6.

La Pêche Maritime, various issues.

Le Solleu, Bernard. "La relance de la pêche artisanale: la fin de la période faste," *Le Marin*, 8 September 1983

Meuriot, Eric. "Fishing Fleet Replacement: The French Policy from 1945 to 1983." *Marine Policy*, October 1986

U.S. Embassy, Paris, France, various reports.

Wade, Nick. "Barents Sea 'Hole' Dispute," *Fishing News International,* September 1993.

World Fishing, various issues.

France

300 km
English Channel
Lille
PARIS
Nancy
Strasbourg
Brest
Orléans
Nantes
Dijon
Limoges
Lyon
Bay of Biscay
Bordeaux
Grenoble
Toulouse
Nice
Perpignan
Marseille
Corsica
Mediterranean Sea

Table 1.--FRANCE. Number and tonnage of high-seas fishing vessels,
ranked by tonnage, 1975-92.

Year	**Gross Registered Tons (GRT)**						**Total**	
	500-999		**1,000-1,999**		**Over 2,000**			
	GRT	No.	GRT	No.	GRT	No.	GRT	No.
1975	42,752	67	40,720	28	12,284	5	95,756	100
1976	48,526	76	35,830	25	12,284	5	96,640	106
1977	48,446	75	32,265	23	12,284	5	92,995	103
1978	46,447	71	27,246	19	12,284	5	85,977	95
1979	46,430	71	24,343	17	7,284	3	78,057	91
1980	47,360	72	25,490	18	7,284	3	80,134	93
1981	43,025	65	24,745	18	7,284	3	75,054	86
1982	42,457	64	24,430	18	7,284	3	74,171	85
1983	43,676	66	25,160	19	7,284	3	76,120	88
1984	43,865	66	25,563	19	7,284	3	76,712	88
1985	45,295	68	26,500	20	7,284	3	79,079	91
1986	41,419	62	26,338	20	7,284	3	75,041	85
1987	43,688	66	27,485	21	7,284	3	78,457	90
1988	43,243	65	24,580	19	7,284	3	75,107	87
1989	44,872	67	24,367	19	7,284	3	76,523	89
1990	43,111	65	30,939	24	7,284	3	81,334	92
1991	44,035	66	29,637	23	7,284	3	80,956	92
1992	41,286	62	33,934	26	4,849	2	80,069	90

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Table 2.--FRANCE. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships, fishermen, catch in metric tons or tonnage in gross registered tons									
Total fishing fleet (GRT)	212,377	210,921	205,770	202,088	204,549	211,802	212,180	199,771	184,497	187,196
Total fishing fleet (Number of vessels)	11,660	11,761	11,508	11,414	11,355	11,243	10,358	8,651	7,388	7,189
High-seas fleet (Number of vessels)	88	88	91	85	90	90	87	92	92	90
High-seas fleet (GRT)	76,120	76,712	79,079	75,041	78,457	75,107	76,523	81,334	80,956	80,069
Catch (Metric Tons)	804,050	797,267	832,582	874,053	848,916	888,132	909,669	898,477	812,773	800,000E
Fishermen (Number)	19,539	20,000E	20,000E	20,000E	20,000E	18,479	19,000E	20,000E	20,063	22,577

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (highseas fleet) and "World Fishing Fleet Study for France," U.S. Embassy, Paris, July 22, 1993 (total fleet).

Table 3.--FRANCE.--Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	NA	28.1	30.3	39.3	39.9	41.8	42.4	48.0	46.0
Coastal NE Atlantic, FAO area 27)	668.0	632.0	625.2	629.4	612.6	637.0	656.6	632.2	535.3
Distant-water:									
NW Atlantic, FAO area 21	34.4	22.0	31.9	34.2	18.5	9.3	5.3	5.3	NA
Eastern Central Atlantic, FAO area 34	56.0	65.2	23.6	33.8	36.0	42.0	48.8	65.9	73.0
Mediterranean & Black Sea, FAO area 37	47.0	46.4	52.4	55.7	50.3	55.2	70.9	67.5	68.5
Southeast Atlantic, FAO area 47	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Western Indian Ocean, FAO area 51	0.0	0.0	68.3	80.4	89.4	102.4	85.1	79.0	87.3
Indian Ocean-Antarctic, FAO area 58	0.0	0.0	0.8	1.1	0.5	0.5	0.6	0.6	1.6
Sub-total	137.9	133.6	177.0	205.2	194.7	209.4	210.7	218.3	231.5
Total	805.9	793.7	832.5	873.9	847.2	888.2	909.7	898.5	812.8

Source: FAO, *Yearbook of Fishery Statistics*, various years.

Table 4.--FRANCE. Listing of French fishing vessels reflagged in 1993.

Vessel name	Tonnage	Year built	Type
	Gross Registered Tons		
CYPRUS:			
Fisherman	442	1972	N.A.
Thalie Zachos	121	1956	N.A.
PANAMA:			
Alkyona Star	419	1948	Trawler, nes
Antonia Paris	208	1961	Trawler, nes
Ar Breizad	208	1964	Trawler, nes
Guadalquivir	404	1981	Tuna vessel
Guadiana	404	1981	Tuna vessel
Porto Santo	1,823	1962	Factory trawler
ST.VINCENT:			
Cape Nord	1,491	1988	Trawler
Klondyke	1,491	1988	Trawler
Nordic II	595	1972	Trawler

Source: Office of Naval Intelligence, U.S. Navy and other sources.

ENDNOTES

1. État de la Flotte, 1993, *GERMES*, Problèmes Économiques Commerciaux et Humains des Entreprises de Pêche, Union des Armateurs à la Pêche de France, Paris, June 1993, p.1. This contrasts with *Lloyd's Register of Shipping Statistical Tables* which lists 90 vessels over 500-GRT in the French fleet in 1992. The authors arbitrarily selected 500-GRT as a benchmark used to classify vessels as high-seas vessels. French statistical tables include 63 vessels that are less than 500-GRT, but are classified as high-seas vessels by French authorities.

2. État de la Flotte, 1993, *GERMES*, Problèmes Économiques Commerciaux et Humains des Entreprises de Pêche, Union des Armateurs à la Pêche de France, Paris, June 1993, p.1.

3. "World Fishing Fleet Study for France," U.S. Embassy, Paris, July 22, 1993.

4. *Eurofish Report*, July 15, 1993, p. SP/1.

5. *Eurofish Report*, July 15, 1993, p. SP/1.

6. Lloyd's Register of Shipping Statistical Tables, Lloyd's Register of Shipping, London, UK, reports 90 vessels for 1992 while État de la Flotte, 1993, *GERMES*, Problèmes Économiques Commerciaux et Humains des Entreprises de Pêche, Union des Armateurs à la Pêche de France, Paris, June 1993, p.1. reports 153 high-seas vessels on January 2, 1993.

7. Meuriot, Eric. "Fishing Fleet Replacement: The French Policy from 1945 to 1983." *Marine Policy*, October 1986, p. 296.

8. Meuriot, Eric. "Fishing Fleet Replacement: The French Policy from 1945 to 1983." *Marine Policy*, October 1986, p. 298.

9. Meuriot, Eric. "Fishing Fleet Replacement: The French Policy from 1945 to 1983." *Marine Policy*, October 1986, p. 301.

10. Meuriot, Eric. "Fishing Fleet Replacement: The French Policy from 1945 to 1983." *Marine Policy*, October 1986, p. 303.

11. Le Solleu, Bernard. "La relance de la pêche artisanale: la fin de la période faste," *Le Marin*, 8 September 1983, no. 1889, p. 7.

12. "French Sail: Decision to Build 3 Fuel Saving 'Thoniers'." *Fishing News International*, February 1981.

13. Meuriot, Eric. "Fishing Fleet Replacement: The French Policy from 1945 to 1983." *Marine Policy*, October 1986, p. 304.

14. "Enquête," *France Éco-Pêche*, June 1991, pp. 20-29.

15. "Catches Inadequate: France to Build Strong Industry," *Irish Skipper*, October, 1991.

16. "Report on the French Fishing Industry," U.S. Embassy, Paris, April 23, 1993.

17. The following section was taken verbatim from "World Fishing Fleet Study for France," U.S. Embassy, Paris, July 22, 1993.

18. *La Pêche Maritime*, October 1988, pp. 625-626.

19. *French Advances in Science and Technology*, Winter 1988, p. 6.

20. One kilowatt is the equivalent of 1.34 horsepower. *Le Marin*, January 3, 1992.

21. U.S. Embassy, Paris, July 22, 1993.

22. U.S. Embassy, Paris, July 22, 1993.

23. U.S. Embassy, Paris, July 22, 1993.

24. *Fishing News International*, December 1985, p. 21.

25. *Fishing News International*, May 1986, p. 35.

26. U.S. Embassy, Paris, July 22, 1993.

27. *France Pêche*, November/December 1990.

28. État de la Flotte, 1993, *GERMES*, Problèmes Économiques Commerciaux et Humains des Entreprises de Pêche, Union des Armateurs à la Pêche de France, Paris, June 1993, p.1.

29. Two French tuna vessels, *Guadalquivir* and *Guadiana*, were reflagged in Panama in 1993.

30. The authors have no information on the sale or reflagging of any other vessels.

2.4

GERMANY

The Federal Republic of Germany's (FRG) high-seas fleet declined from 230 vessels in 1950 to only 16 vessels in 1990.[1] In 1989, a massive 5,845-GRT pelagic stern trawler, the *Jan Maria*, was launched in Bremerhaven, Germany.[2] The *Jan Maria*, and her sister ships, the *Dirk Dirk,* and the *Gerda Maria,* are able to fish anywhere in the world and pose significant competition to fishermen operating on the high-seas. Some observers felt that the vessels might stimulate a rebirth in the FRG fishing fleet. The union of the FRG with the German Democratic Republic (GDR) on October 3, 1990, temporarily increased the FRG fishing fleet, but most of the former GDR vessels have since been sold and the FRG is again reducing its role as a high-seas fishing state.

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1. General Background

The FRG has a coastline of only 570 kilometers.[3] This limits the country's ability to fish and forces Germans to seek fish from distant fishing grounds. There are nearly 84 million consumers in the unified Federal Republic and these consumers enjoy seafood. Fisheries plays a minuscule role in the nation's economy despite landings of about 265,000 tons in 1992.[4] Affluent, quality-conscious German consumers purchase large quantities of traditional fish, such as herring, cod, saithe, salmon, and shellfish from overseas suppliers. Despite increased landings (thanks in part to the addition of the former GDR's fisheries catch), West Germany is the seventh largest importer of edible fishery products in the world.[5] FRG imports of edible fishery products in 1992 were 683,000 tons, worth slightly over $2 billion.[6] Germany now imports significant quantities of unprocessed fish which is used to produced finished, high-value fishery products suited to Germany tastes. German importers also purchase finished seafood products for sale in Germany; much of this comes from Denmark and Holland. Germany is also an important market for fresh fish and shellfish, such as farmed Atlantic salmon from Norway.

2. Fleet Background

The FRG operates several distinct fishing fleets, including mussel harvesting vessels, a cutter fleet (coastal vessels), and a high-seas fleet.[7] The high-seas fleet includes 3 components: a middle water fleet, a fleet specializing in the catch of shoaling species (herring, capelin), and a deep-sea fleet. The fleets traditionally operate out of Bremerhaven, Cuxhaven and Rostock.[8]

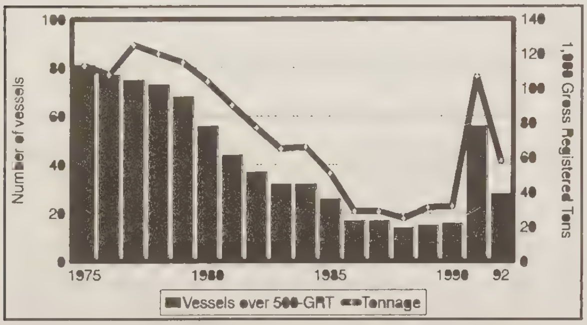

Figure 1. Germany's high-seas fleet, 1975-92.

The West Germans pioneered the use of factory trawlers in distant waters and the "one-boat method of mid-water trawling."[9] The Baader fish cutting machines made it possible for German fishermen to produce frozen fillets economically at sea.[10] The FRG, thus, should be one of the world's leading fishing nations. Instead the German fishing industry has slowly collapsed. There were 40 companies operating 230 high-seas vessels in 1950. This declined to 13 fishing firms operating 196 vessels in 1960. Many of Germany's high-seas factory stern trawlers were built in the 1960s, including the *Othmarschen* (1,400-GRT), the *Hamburg* (1,800-GRT), the *Bonn* (2,557-GRT, the first of six "university" class factory stern trawlers), the *Österreich* (2,700-GRT) and *Sonne* (2,700-GRT) launched in 1969. Many of these vessels were well-designed and well-equipped factory trawlers considered the "world's finest and most efficient frozen fillet producing stern trawlers."[11] Unfortunately, despite the construction of these massive vessels, the German high-seas fisheries declined to 10 firms operating 108 vessels in 1970.[12] Fourteen new *Bremen*-class stern trawlers were built in the early 1970's, but the establishment of 200-mile fishery zones in Germany's traditional fishing grounds had a major impact on the nation's high-seas fisheries. There were only 4 firms[13] operating 56 high-seas fishing vessels in 1980. The FRG high-seas fishing fleet of 17 vessels was restructured in 1986 to operate under 2 firms: Deutsche Fisch fang Union, Cuxhaven GmbH and Bremerhaven Operating Company.[14] Faced with declining stocks and increasing competition from foreign fishermen, the German high-seas fleet declined to 14 vessels by 1988. On October 3, 1990, the German Democratic Republic and the Federal Republic Germany united. This resulted in former GDR vessels being added to the FRG fishing fleet; most of these vessels have since been sold.

a. Loss of traditional grounds:

German distant-water vessels fished off the United States, Canada, Greenland, the Faroe Islands, and Norway between 1950 and 1970. Approximately half of Germany's catch came from distant-waters by the early 1970s.[15] Many countries established 200-mile exclusive economic zones in the mid- to late-1970s and either excluded or phased out foreign fishing in their waters. The Germans hoped that the European Community would establish a Common Fisheries Policy (CFP) that would assist member states to gain access to former fishing grounds.[16] The creation of the CFP, however, was delayed by political wrangling.[17] By 1980, the German deepsea fleet was facing serious difficulties.[18] Reductions in the FRG quota off Greenland resulted in 14 high-seas vessels being considered as redundant by 1984.[19] Norwegian authorities gradually imposed stricter conditions on vessels operating in their waters; if a vessel's total catch included more than 15-percent of undersized fish, the vessel was required to leave Norwegian waters. Loss of traditional fishing grounds off Canada and the United States also had a negative impact on FRG high-seas fleet owners during the early 1980s. In 1983, the CFP was established and the EC acted to assign total allowable catch (TAC) quotas. However, German fishermen were forced to share their quotas with other EC members. In retrospect, it is clear that the advent of 200-mile limits hastened the demise of the German high-seas fishing fleet.

b. Growing competition

Icelandic vessels began landing fresh fish in FRG ports in the early 1980s.[20] The Icelandic fishermen were attracted by the high prices and growing demand for fresh seafood, particularly cod and redfish, on German markets. As German vessels struggled to locate new fishing grounds, the Icelandic fleets began increasing their shipments. Dutch fishermen also began shipping increasing quantities of mackerel which kept prices low. Shipments of fresh fish from Grimsby and Hull, in the U.K., into German ports were also increasing to the detriment of German fishermen.[21] By 1986, it was apparent that the FRG fishing fleet was unable to meet the booming demand for fish in the FRG market and that imports of fish would increasingly be needed.[22] Shipments of raw, semi-processed and fully processed seafoods from Norway and Denmark have also increased in recent years at prices that made it difficult for the German fishing fleet to compete.

c. Declining stocks:

The harvest of many key species, including cod, hake, haddock, and other groundfish declined as overfishing, biological fluctuations, and oceanic conditions reduced the biomass of these species, especially in the North Sea where competition for limited resources was growing stronger. Lower fishing quotas, increasing competition, and loss of traditional fishing grounds negatively impacted the German fleet.

d. Other factors:

The decline in the German fishing fleet began in the 1960s and continued through the 1980s. Except for a brief flurry of construction during the years between 1971 and 1974, there were few modern vessels added to the fishing fleet; by 1986, it was obvious that the newest vessels -- 14 *Bremen*-class stern trawlers -- could no longer operate profitably. Efforts to operate joint ventures in Argentina and New Zealand and in the Seychelles also were unsatisfactory. Ultimately, it appears that it simply became more profitable for German processors to import fishery products from the Netherlands, Norway, Iceland, and Denmark than to maintain expensive and continually less efficient vessels.

3. Modernization Programs

The FRG fishing fleet boasted of being one of the most efficient in the world in the 1960s. In 1971-74, a total of 14 new high-seas *Bremen*-class stern trawlers of 3,180-GRT were built in FRG shipyards.[23] Although FRG shipyards continue to produce new vessels from time to time, there have been no other sustained efforts to modernize the FRG fishing fleet since the early 1970s.

4. Decommissioning Programs

The FRG high-seas fleet decreased from 32 vessels in 1984 to 17 vessels in 1986. Three large factoryships, the *Wesermüende*, *Geestemüende*, and *Stuttgart* were sold the People's Republic of China as part of this reduction process. The FRG also sold the *Friedrich Busse* to the Republic of Korea; the vessel had formerly fished off Alaska.[24] The FRG is obliged to meet decommissioning programs established by the EC. The FRG has complied closely with these decommissioning guidelines and is expected to continue to do so in the future.[25]

5. Shipyards

German shipyards produce high quality fishing vessels, but they did not build many new fishing vessels between 1974 and 1988. In 1988, the Mutzelfeldt Werft of Cuxhaven began work on the first of 2 wet fish trawlers to have been built in German shipyards in many years. The vessels were built for Deutsche Fischfang-Union GmbH which also owns the *Kiel* and *Wiesbaden*. In 1989, the *Jan Maria*, a 5,845-GRT pelagic stern trawler was christened in Bremerhaven. The vessel was specifically built to catch Germany's quota of herring and mackerel; FRG vessels caught only 18 percent of the nation's 71,000 ton herring quota in 1987.[26] Most FRG vessels are designed to catch and process high value cod or other groundfish. The *Jan Maria* was built for Katwijk Aan Zee of the Netherlands. The Dutch company established the German-based Doggerbank Seefischerei GmbH, a company which will operate the vessel under the German-flag. Doggerbank Seefischerei GmbH operated two other former Dutch factory ships, the *Dirk Diederik* and the old *Jan Maria*.[27] The *Cuxhaven*, a wet fish filleter was launched in 1990 from the Muzelfeldwerft yards in Cuxhaven for Deutsche Fischfang-Union. The vessel was assigned to fish for cod in the North Atlantic and off Eastern Greenland.[28] In 1993, the Russian Far East ordered a series of 13 longliners to be built in West German shipyards. The third vessel in the series was launched by the Elbewerft Boizenburg GmbH shipyard in August 1993.[29] The shipyard has recently been privatised and is looking to modernise Russian vessels.

6. International Agreements

The Federal Republic of Germany is a member of the European Community, delegating to the EC the authority to negotiate access and fishing quotas in foreign EEZs. FRG vessels traditionally share in agreements negotiated with Greenland, the Faroe Islands, Norway, and Sweden.

7. Fleet Dispersal Plans

An Icelandic Company, Mtgerdarfelag Akureyringa, a member of the Icelandic Freezing Plants Corporation, recently purchased 8 groundfish trawlers belonging to the Mecklenberger Hochseefischerei fleet in the former East German port of Rostock. Mtgerdarfelag Akureyringa purchased a 60-percent interest in the vessels. The State of Mecklenberger controls 25.1 percent of the new corporation, Rostock harbor owns 10 percent, and the town of Rostock controls 4.9 percent. The arrangement allows the vessels to land fish in Icelandic ports. The vessels will fish for oceanic redfish, which is popular in the German market, off the southwestern coast of Iceland .[30]

The outlook for the FRG high-seas fleet is for the fleet to slowly continue to decline, although some modern vessels may be added in the coming years. The addition of several super-trawlers designed to fish herring and mackerel did not spur a rebirth in German fisheries. Likewise, the addition of the former GDR fishing fleet had only a limited impact on German fisheries; most of the former-GDR fleet has been sold or scrapped. The FRG does not appear to be a major player in high-seas fisheries and this is unlikely to change in the next few years.

The supertrawlers *Jan Maria*, the *Annie Hillina*, and the *Gerda Maria* are designed to fish for non-quota fish (mackerel and horse mackerel) and herring on the high-seas. These vessels are owned by Doggerbank Seefischerei, a wholly-owned subsidiary of the Dutch Parlevliet company. Parlevliet & van der Plas BV also own the *Dirk Diederick* and the *Dirk Dirk*, some of the largest supertrawlers in the world also designed to fish for mackerel, horse mackerel and herring. This one company, operating these 5 vessels, is capable of fishing for pelagic species anywhere in the world.

SOURCES

Allgemeine Fischwirtschaftszeitung, February 1986

Burbach, Rolf and Ingo Fiedler, "The German Fishing Fleet on 31.12.1991," *Annual Report on German Fisheries, 1991/92*, Federal Ministry of Food Agriculture and Forestry, in cooperation with the Federal Statistical Office, Bonn, December 1992.

Eurofish Report, various reports.

Fisch International, various issues.

Fishing News International, various reports.

Folsom, William B."The Federal Republic of Germany's Fisheries, 1989," *International Fisheries Report*, IFR-90/89, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, December 14, 1990

Hjul, Peter. *The Stern Trawler,* Fishing News (Books) Ltd., London, 1972.

McFeeters, Brian D. "Germany's Fisheries Market,"*International Fisheries Report*, IFR-89/98, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, December 1, 1989.

Statistisches Bundesamt, Wiesbaden; Aussenhandel nach Waren und Landren cited in *European Supplies Bulletin*, Sea Fish Industries Authority, United Kingdom

U.S. Embassy, Bonn, various reports.

World Fishing, various reports.

Table 1.--FEDERAL REPUBLIC OF GERMANY. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	No.	GRT	No.	GRT	No.	GRT	No.
1975	32,756	38	25,453	17	75,519	26	133,728	81
1976	32,104	37	21.201	14	75,519	26	107,644	77
1977	35,137	40	14,474	9	75,512	26	125,123	75
1978	34,736	39	12,689	8	72,834	26	120,259	73
1979	30,895	35	10,961	7	72,834	26	114,690	68
1980	21,055	24	9,717	6	72,834	26	103,606	56
1981	15,174	17	5,237	3	69,981	24	90,392	44
1982	13,567	15	5,888	3	57,473	19	76,928	37
1983	12,407	14	5,888	3	46,673	15	64,968	32
1984	12,407	14	3,938	2	49,229	16	65,574	32
1985	10,474	12	3,938	2	36,736	12	51,148	26
1986	9,026	10	1,943	1	18,150	6	29,119	17
1987	8,543	10	1,943	1	18,150	6	28,636	17
1988	6,556	8	-	-	18,150	6	24,706	14
1989	6,024	7	1,178	1	23,995	7	31,197	15
1990	6,024	7	2,178	2	23,995	7	32,197	16
1991	19,845	23	18,171	10	68,974	23	106,990	56[a]
1992	5,643	7	19,349	11	32,667	10	57,659	28

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[a] Includes the former East German fishing fleet following unification on October 3, 1990.

Table 2.--FEDERAL REPUBLIC OF GERMANY. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990[b]	1991	1992
	Number of vessels and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	89,083	81,009	61,356	58,408	53,700	51,302	50,613	104,000	74,377	NA
Total fishing fleet (Number of vessels)	1,617	1,077	922	672	643	628	591	1,232	1,843	1,800E
High-seas fleet (Number of vessels)	32	32	26	17	17	14	15	16	56	28
High-seas fleet (GRT)	64,968	65,574	51,148	29,119	28,636	24,706	31,197	32,197	106,990	57,659
Catch (Metric Tons)	305,494	327,156	225,287	202,366	201,837	209,458	233,952	390,744	300,164	310,000
Fishermen (Number)	3,524	3,338	2,721	2,673	2,753	2,753	2,732	2,682	4,785	NA

Sources: FAO, *Yearbook of Fishery Statistics*, Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet). "German landings in 1992," *Eurofish Report*, July 15, 1993, p. Sp/3 (FRG landings for 1992) and *Annual Report on German Fisheries, 1991/92*, Federal Ministry of Food, Agriculture, and Forestry, Bonn, December 1991 (total fleet and number of fishermen for 1991). (E) = Estimate.

[b] The Federal Republic of Germany (FRG) and the German Democratic Republic (GDR) were reunited on October 3, 1990. This increased the size of the FRG fishing fleet and fisheries catch as the result of the addition of the former-GDR fleet and catch to the FRG's statistics.

Table 3.--FEDERAL REPUBLIC OF GERMANY. Fisheries catch by FAO area, 1975, 1980, 1985-91.

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991[c]
	1,000 Metric Tons								
Inland (FAO area 05)	15.0	18.2	24.0	24.2	24.0	25.1	29.0	31.0	55.3
Coastal[d] (Northeastern Atlantic and Baltic Sea, FAO area 27)	342.1	259.0	171.0	169.5	170.0	176.0	191.0	210.0	277.0
Distant-water:									
NE Atlantic, FAO area 21	80.2	23.3	30.4	9.0	8.2	9.0	14.3	9.4	22.9
E Atlantic, FAO area 34	0	0	0	0	0	0	0	0	12.7
NE Pacific, FAO area 67	0	8.0	0	0	0	0	0	0	0
SE Pacific, FAO area 87	4.4	0	0	0	0	0	0	0	0
Sub-toal	84.6	31.3	30.4	9.0	8.2	9.0	14.3	9.4	35.6
Total	441.7	308.5	225.4	202.7	202.2	210.1	234.3	250.4	367.9

Source: FAO, *Yearbook of Fishery Statistics*, various years.

[c] Includes the catch of the former German Democratic Republic.

[d] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

ENDNOTES

1. The German Ministry for Food and Forestry reported that there were 75 vessels in the FRG high-seas fishing fleet in 1990. Angela Schindler-Daniels, U.S. Embassy, Bonn, Germany, fax dated September 10, 1993.

2. The vessel and her sister ships were all owned by a Dutch company. The 3 vessels were, however, registered as German fishing vessels. "Dutch emblem, German flag," *Fisch International*, May-June 1988, pp. 20-21.

3. This was prior to unification. Reunification added a considerable coastline to Germany, in the Baltic Sea.

4. The German Ministry for Food and Forestry as reported by Angela Schindler-Daniels, U.S. Embassy, Bonn, Germany, fax dated September 10, 1993.

5. For additional information see: William B. Folsom, "The Federal Republic of Germany's Fisheries, 1989," *International Fisheries Report*, IFR-90/89, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, December 14, 1990 and Brian D. McFeeters, "Germany's Fisheries Market,"*International Fisheries Report*, IFR-89/98, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, December 1, 1989.

6. Statistisches Bundesamt, Wiesbaden; Aussenhandel nach Waren und Landren cited in *European Supplies Bulletin*, Sea Fish Industries Authority, United Kingdom, p.15.

7. This report deals only with the Federal Republic of Germany's fishing fleet prior to reunification in 1990, although some references are made to the former German Democratic Republic. It is still premature to talk authoritatively about the fisheries of the unified nation.

8. "German fishing vessel pool is a success, says DFFU," *World Fishing,* January 1987.

9. Peter Hjul, *The Stern Trawler,* Fishing News (Books) Ltd., London, 1972, p. 153.

10. Peter Hjul, *The Stern Trawler,* Fishing News (Books) Ltd., London, 1972, p. 153.

11. Peter Hjul, *The Stern Trawler,* Fishing News (Books) Ltd., London, 1972, pp. 153-157.

12. "No participation in fisheries umbrella," *Eurofish Report*, June 20, 1985.

13. "Nordsee" Deutsche Hochseefischerei GmbH (8 vessels in 1984 and 6 ships in 1985), Hanseatische Hochseefischerei AG (6 vessels in 1984, but none in 1985), Hochseefischerei Nordstern AG (3 vessels in 1984 and only 1 vessel in 1985), and Partenreederei Pickenpack, Hbg (2 vessels in 1984 and 1 vessel in 1985). *Allgemeine Fischwirtschaftszeitung*, No.2, February 1986, p. 33.

14. "Restructured fleet gives trawlers a fresh start," *Fishing News International*, March 1986, p. 12.

15. "Despite losses since 1976...West Germany to stay in deepsea fishing," *Fishing News International,* March 1983, p. 64.

16. "More problems for Schleswig-Holstein cutter fleet," *Eurofish Report*, May 27, 1981, p. SP/9 and "Bankers concerned about German fleet's future," *Eurofish Report,* June 10, 1981, p. FS/2.

17. "A Norwegian view of the German market," *Eurofish Report*, February 10, 1982, p. FS/4.

18. "Despite losses since 1976...West Germany to stay in deepsea fishing," *Fishing News International,* March 1983, p. 64.

19. "Further contraction of high seas fleet feared," *Eurofish Report*, May 24, 1984, p. FS/7.

20. Manfred Koch, Managing Director, Deutsche FischFang-Union GmbH & Company, "West Germany's fishing fleet," *World Fishing*, January 1990, pp. 2-3.

21. "German fishing vessel pool is a success, says DFFU," *World Fishing,* January 1987.

22. Tom Wray, "Supply struggle," *Fishing News International*; March 1986, p.11-12.

23. "A Norwegian view of the German market," *Eurofish Report*, February 10, 1982, p. FS/4.

24. "Chinese to purchase German technology," *Eurofish Report*, September 11, 1986, p. FS/5.

25. Rolf Burbach and Ingo Fiedler, "The German Fishing Fleet on 31.12.1991," *Annual Report on German Fisheries, 1991/92*, Federal Ministry of Food Agriculture and Forestry, in cooperation with the Federal Statistical Office, Bonn, December 1992.

26. "West Germany's 250-ton-a-day pelagic freezer," *Fishing News International*, January 1989, p. 40-45.

27. The *Dirk Diederick* was sold to Mauritania and the old *Jan Maria* was sold to Peru.

28. "Fresh fish filleter worth waiting for," *Fishing News International,* July 1990, p. 3.

29. "Third liner launched," *Fishing News International,* August 1993, p. 24.

30. Ian Strutt, "Iceland Buys into Rostock Fleet," *Fishing News International*, April 1993, p. 17.

Germany

Kiel Bay
Baltic Sea
North Sea
Rostock
Hamburg
Bremen
BERLIN
Hannover
Leipzig
Dresden
Bonn
Frankfurt
250 km
Stuttgart
Munich

2.5

GREECE

Greece has one of the largest fishing fleets in Europe, but 90 percent of the fleet consists of small, wooden vessels. The Greek high-seas fleet in 1992 included 17 vessels, including three vessels over 2,000-GRT registering a total of 6,975 Gross Registered Tons (GRT). Most of the Greek high-seas fishing fleet operates out of ports along the shores of West Africa, where it has fished for years. There is little to suggest that Greek fishing vessels will venture into distant-water fisheries beyond their present fishing areas, which also include the Falkland Islands. The EC is providing grants to modernize the Greek fleet and is attempting to move Greek fishermen into new distant fishing grounds. Greek vessels might be attracted by fishing opportunities off Argentina that were negotiated by the European Community in 1992. A Greek fishing company plans to begin fishing in Iranian waters in 1993 or 1994.

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1. General Background

Greek landings of fish and shellfish amounted to 149,000 tons in 1991 valued at $762 million. The Greek catch included 138,400 tons caught in the Mediterranean off the coast of Greece and 16,000 tons caught in distant waters. In 1991, the Greek fishing fleet included 20,860 inshore vessels averaging slightly under 5 tons (95,000 GRT total), 849 offshore vessels (42,452 tons), and 82 high-seas vessels (26,000 tons), averaging about 317 GRT per vessel. Ninety seven percent of the fleet consists of small, coastal vessels, mostly longliners, gillnetters, and small trawlers.

The Greek fishery is divided into several categories: **Coastal (Inshore) fishing**, which operates along the Greek coastline, close to natural ports. **Offshore fishing** operates in areas in the North African Mediterranean coast. **Distant-water (high-seas) fishing** operates in the Central Atlantic and off the West African coastline. The vessels in this fleet include fairly small craft, as well as large vessels. **Sponge fishing** takes place off the coast of Greece and in the Mediterranean.[1] Despite an extensive coastline of about 15,000 kilometers and a shelf area of 57,000 square kilometers, the nation's offshore resources are not suitable for large harvests. Oceanic conditions in the Mediterranean, although providing seafood for over a thousand years, are not suited for high yields. Greek fisheries traditionally are the source of a modest livelihood for many thousands of small boat owners, but not for large fishing vessels. The fishing industry contributes less than 2 percent of the Gross Agricultural Product of the nation and is not expected to expand in the future.[2] Despite natural limitations and an aging fleet of small vessels, the Greek catch has increased from 100,000 tons in 1983 to 165,500 tons in 1992.[3] Some of this growth might be attributed to the modernization of the high-seas or distant-water fishing fleet in recent years. Greece continues to rely on imports to meet the seafood requirements of its people. Greek fishery imports were 58,400 tons worth $218 million versus exports of 22,100 tons worth $147 million in 1992.[4] An overview of the Greek fishing industry can be seen in tables 1-3.

2. Fleet Background

The Greek "distant-water"[5] fishing fleet went from 13 vessels catching 12,000 tons in 1961 to a high of 65 vessels catching 33,700 tons in 1971. The fleet declined abruptly from 68 vessels landing 21,000 tons in 1976 to 48 vessels harvesting 26,500 tons in 1977 to 46 vessels catching 19,000 tons in 1978. The distant-water fleet declined further to 31 vessels catching 13,500 tons in 1982 shortly after the country joined the European Community.[6] The distant-water fleet reportedly reached 48 vessels in 1987.[7] Since then the distant-water fleet has grown to 82 vessels catching 16,000 tons in 1991.[8]

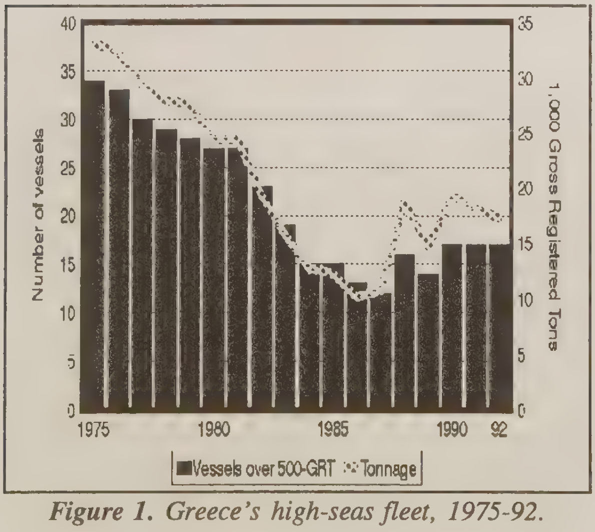

Figure 1. Greece's high-seas fleet, 1975-92.

The Greek fleet has some fairly large vessels. In 1976, for example, the fleet included 21 vessels (13,808-GRT) in the 500- to 999-GRT range, 10 vessels (12,210-GRT) in the 1,000- to 1,999-GRT range, and 2 vessels (6,412-GRT) over 2,000-GRT. This fleet operated in both the industrial and offshore fisheries.[9] It was reported that some Greek vessels were fishing for pilchard, anchovy, horse mackerel, and hake off Argentina in 1977.[10] The increase in the size of the fleet since 1987 includes the addition of several vessels over 2,000-GRT (table 1). In 1992, the high-seas fleet included 17 vessels, including 4 vessels over 2,000-GRT. Some of these vessels had fished off the Falkland Islands from 1987 to 1990 averaging less than 5,000 tons annually (table 3 and appendix 29-31).

3. Modernization Programs

The Greek government has spent relatively modest sums of money to modernize the nation's fishing fleet. Many of the vessels in the Greek fishing fleet are outdated and programs to alter this situation were quite modest prior to Greece joining the EC in 1981.[11] In 1991, the Greek Ministry of Agriculture spent $98,000 on the replacement or modernization of fishing vessels, which again is a small sum when one considers that the Greek fleet included approximately 21,000 vessels in 1991.

4. Decommissioning Programs

Greece is required to reduce the size of its fishing fleet in accordance with the EC Multi-Annual Guidance Program for Fisheries (EEC Regulation 4028/86). No new commercial fishing licenses have been issued since 1988, except as a replacement for vessels of similar capacity and engine size. This prohibition is in accordance with Greek Regulation (Presidential Decree 261/91). In 1991, Greece spent $2.9 million on the withdrawal of fishing vessels (under EEC Regulation 4028/86), and $111,000 for the withdrawal of beach seiners under 12 meters in length under the Integrated Mediterranean Program. The Greek decommissioning program in 1991 was aimed at reducing the size of the coastal fishing fleet. A total of 123 vessels were decommissioned in 1991. The only high-seas vessel decommissioned according to EC directives that the authors have found is the *Xifias*, a 695-GRT vessel built in 1947 and sold to a third country on November 18, 1988.[12]

5. Shipyards

Greek shipyards are able to produce small wooden, coastal vessels and have done so for many years. In 1988, it was reported that a Greek shipyard in Piraeus was building a 60-meter long factory-ship for operations off the Falkland Islands.[13] Another vessel, the *Miastralli II,* was also built in a Greek shipyard; the vessel was designed to fish off Senegal and Nigeria. The vessel was lengthened in 1989, and sent to fish for squid off the Falkland Islands.[14] Another vessel, the 28-meter *Laconia* was launched in 1990 as part of the process to modernize the Greek coastal fleet.[15]

6. International Agreements

Greek fishermen pioneered the development of fisheries off Africa by sending freezer vessels down to the Saharan Bank off Mauritania as early as 1952.[16] Other vessels found their way into the Indian Ocean where they began fishing for shrimp. By the end of the 1970's, Greek fishermen began facing tough competition from Spanish, Japanese, and Soviet fishing fleets.[17] The situation grew more difficult in the mid-1970s when many nations extended their fishery zones to 200-miles. This displaced many foreign vessels that had been fishing off the coast of Africa. In 1979, the Greeks decided they could not renew their costly agreement with Mauritania and shifted their shrimping operations south to Guinea, Sierra Leone, and Nigeria.[18] When Libya extended control over its waters out to 50 miles, Greek fishermen established a joint venture company with 11 vessels to operate within those waters.[19] Landings from the joint venture operations with Libya were estimated at 500 tons annually.[20] The joint venture was eventually terminated.

Greece joined the European Community on January 1, 1981. Greek fishing vessels now operate in accordance with EC bilateral agreements. Greek fishing owners operated 90 vessels in overseas waters in 1991, including: Senegal, Guinea (Conakry), Guinea (Bissau), The Gambia, and the Ivory Coast. One Greek vessel was caught fishing for shrimp in Nigeria's EEZ in 1991. The vessel's captain was fined $20,000 after being found guilty of catching and packaging shrimp in Nigerian waters without a license and labeling packages "Product of Greece."[21] Provisions were made for 3 Greek high-seas vessels to fish in Morocco's waters between 1992-94 as part of the new EC-Morocco fisheries agreement signed on May 15, 1992.[22] Greece has no other bilateral fisheries agreements. The Greek fisheries off Africa (FAO area 34) yielded about 16,000 tons of fish out of a total of 149,000 tons landed in 1991 according to FAO estimates.

7. Fleet Dispersal Plans

The addition of 4 new vessels over 1,000-GRT in the last few years suggests that Greece has a capability to fish on the high seas. It is likely that Greece will continue to fish off West Africa or may take advantage of the new EC agreement with Argentina to shift several vessels into those waters. A Greek firm, Lina Transoceanic Fishing and Shipping Company, has announced plans to fish in Iranian waters in 1993 or 1994. The firm will operate a Greek stern trawler, the *Chrissoula,* under contract to Iran. The vessel is currently being modernized at a Piraeus shipyard.[23] A recent story from Somalia reports that "pirate trawlers" from Greece and other countries are illegally fishing for lobster, crab, and tuna in Somali waters at night. No documentation exists for this claim made by Mohamed Abshir Muse of the Somali Salvation Democratic Front.[24]

SOURCES

Eurofish Report, various issues.

European Supplies Bulletin, Annual Data 1992, Sea Fish Industry Authority, Edinburgh, 1993

"Financial Support to the Fishing Industry," *Organization for Economic Co-Operation and Development*, Paris, 1985

*Fishing News Internationa*l, various reports.

Greek Agriculture, Data and Facts, 1982, Ministry of Agriculture, Athens, 1985.

Kotsolios, M. "The present situation and current trends in Development of fishing activities in Greece," *Technical Consultation on Stock Assessment in the Eastern Mediterranean*, Athens, Greece, March 28-April 1, 1988, Food and Agriculture Organization of the United Nations, Rome, 1989, p. 173.

"Somalia: Fish pirates," *Seafood Leader*, July/August 1993.

Steel, David I.A., "Greek fisheries and accession to the European Community," *Fishery Economics Research Unit, Occasional Paper Series*, Number 4, Edinburgh, September 1979

U.S. Embassy, Athens, various reports.

"Vessels withdrawn according to Article 24 of Regulation (EEC) No. 4028/86, *Official Journal of the European Communities*, No C 320/2, December 22, 1989.

World Fishing, various issues.

Greece

150 km
Thessaloníki
Corfu
Ioánnina
Límnos
Lésvos
Aegean Sea
Khíos
ATHENS
Pátrai
Ionian Sea
Sámos
Pelopónnisos
Náxos
Kos
Rhodes
Crete
Mediterranean Sea

Table 1.--GREECE. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	**Gross Registered Tons (GRT)**						**Total**	
	500-999		**1,000-1,999**		**Over 2,000**			
	GRT	No.	GRT	No.	GRT	No.	GRT	No.
1975	14,434	22	12,210	10	6,412	2	33,056	34
1976	13,808	21	12,210	10	6,412	2	32,430	33
1977	13,181	20	9,769	8	6,412	2	29,362	30
1978	13,181	20	8,335	7	6,412	2	27,928	29
1979	12,670	19	8,384	7	6,412	2	27,466	28
1980	12,670	19	8,384	7	3,242	1	24,296	27
1981	12,670	19	8,464	7	3,242	1	24,376	27
1982	10,784	16	8,464	7	-	-	19,248	23
1983	9,624	14	6,152	5	-	-	15,776	19
1984	7,743	11	4,971	4	-	-	12,714	15
1985	7,303	11	4,971	4	-	-	12,274	15
1986	6,378	10	3,805	3	-	-	10,183	13
1987	5,712	9	2,626	2	2,315	1	10,653	12
1988	5,712	9	3,705	3	9,301	4	18,718	16
1989	6,738	10	1,005	1	6,981	3	14,724	14
1990	8,806	12	1,005	1	9,309	4	19,120	17
1991	8,676	12	2,590	2	7,000	3	18,266	17
1992	9,276	13	1,005	1	6,975	3	17,256	17

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Table 2.--GREECE. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	172,651	187,227	191,550	150,000E	137,761	130,000E	130,000E	130,000E	130,000E	130,000E
Total fishing fleet (Number of vessels)	12,937	13,535	15,000E	17,000E	20,228	20,000E	21,813[a]	21,791	21,000E	21,000E
High-seas fleet (Number of vessels)	19	15	15	13	12	16	14	17	17	17
High-seas fleet (GRT)	15,776	12,714	12,274	10,183	10,653	18,718	14,724	19,120	18,266	17,256
Catch (Metric Tons)	99,935	108,166	114,758	124,655	134,599	126,939	139,827	142,026	149,020	149,000E
Fishermen (Number)	37,159	27,700	27,000	39,000	39,000	39,800	40,164	39,000E	39,000E	39,000E

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet).

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[a] Includes many of the small coastal vessels that fish in Greek waters.

Table 3.--GREECE. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	8.3	10.0	8.526	10.212	10.292	10.000	9.797	10.000	10.076
Coastal[b] (Mediterranean Sea, FAO area 37)	63.0	73.1	94.872	103.129	109.294	104.314	112.030	113.896	112.944
Distant Water:									
EC Atlantic, FAO area 34	24.0	22.1	11.360	11.314	13.505	9.103	13.957	14.057	16.000
SW Atlantic, FAO area 41	-	-	0	0	1.508	3.522	4.053	4.073	0
Sub-toal	24.0	22.1	11.4	11.3	13.0	13.1	18.0	18.2	16.0
Total	95.3	105.2	115.6	123.5	131.3	126.1	139.1	140.2	149.0

Source: FAO, *Yearbook of Fishery Statistics*, various years.

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[b] The distinction between "coastal" and "distant water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

ENDNOTES

1. M. Kotsolios, "The present situation and current trends in Development of fishing activities in Greece," *Technical Consultation on Stock Assessment in the Eastern Mediterranean*, Athens, Greece, March 28-April 1, 1988, Food and Agriculture Organization of the United Nations, Rome, 1989, p. 173.

2. "A profile of the Greek fishing industry," *Eurofish Report,* October 15, 1980, p. FS/1.

3. "Greek fish consumption and production up in 1992," *Eurofish Report*, July 29, 1993, pp. SP/2-3.

4. *European Supplies Bulletin,* Annual Data 1992, Sea Fish Industry Authority, Edinburgh, 1993, pp. 18-19 and "Greek fish consumption and production up in 1992," *Eurofish Report*, July 29, 1993, pp. SP/2-3.

5. Many of these vessels are small, coastal vessels. In 1979, for example, the "high-seas" or "distant-water" fleet consisted of 27 trawlers and 18 shrimp trawlers. The newest vessel was built in 1960. Most of the vessels built before 1960, obviously, were fairly small by current standards. David I.A. Steel, "Greek fisheries and accession to the European Community," *Fishery Economics Research Unit, Occasional Paper Series*, Number 4, Edinburgh, September 1979, p. 3. The figures in this section do not match the figures shown in the statistical tables, which only include vessels over 500-GRT.

6. *Greek Agriculture, Data and Facts, 1982*, Ministry of Agriculture, Athens, 1985.

7. M. Kotsolios, "The present situation and current trends in Development of fishing activities in Greece," *Technical Consultation on Stock Assessment in the Eastern Mediterranean*, Athens, Greece, March 28-April 1, 1988, Food and Agriculture Organization of the United Nations, Rome, 1989, p. 173.

8. "Greek fisheries production and trade in 1991," *Eurofish Report*, July 1, 1993, p. SP/4.

9. David I.A. Steel, "Greek fisheries and accession to the European Community," *Fishery Economics Research Unit, Occasional Paper Series*, Number 4, Edinburgh, September 1979, p. 19.

10. "Greece: a problem of access," *Fishing News International*, August 1980, p. 71.

11. "Financial Support to the Fishing Industry," *Organization for Economic Co-Operation and Development*, Paris, 1985, p. 111-116.

12. "Vessels withdrawn according to Article 24 of Regulation (EEC) No. 4028/86, *Official Journal of the European Communities*, No C 320/2, December 22, 1989.

13. Ian Strutt, "Biggest factory ship on the way," *Fishing News International*, August 1988, p. 57.

14. Ian Strutt, "Biggest factory ship on the way," *Fishing News International*, August 1988, p. 57.

15. "Latest stern trawler launched for Greek fishing fleet," *World Fishing*, December 1990, p. 28.

16. David I.A. Steel, "Greek fisheries and accession to the European Community," *Fishery Economics Research Unit, Occasional Paper Series*, Number 4, Edinburgh, September 1979, p. 2.

17. "Development aid for Greek fisheries recommended by parliament committee," *Eurofish Report*, January 17, 1983, p. BB/6.

18. David I.A. Steel, "Greek fisheries and accession to the European Community," *Fishery Economics Research Unit, Occasional Paper Series*, Number 4, Edinburgh, September 1979, pp. 2-3.

19. "Development aid for Greek fisheries recommended by parliament committee," *Eurofish Report*, January 17, 1983, p. BB/7.

20. "Development aid for Greek fisheries recommended by parliament committee," *Eurofish Report*, January 17, 1983, p. BB/6.

21. "World Fishing Fleet Study," U.S. Embassy, Lagos, July 2, 1993.

22. "World fishing fleet study," U.S. Embassy, Rabat, July 1, 1993.

23. "Greek trawler seeks first catch in Iran," *Fishing News International*, July 1993, p. 27.

24. "Somalia: Fish pirates," *Seafood Leader*, July/August 1993, p. 62.

2.6

IRELAND

The *Atlantic Challenge*, launched in 1986, was the first of several ultramodern ships delivered to Irish skippers in the last few years. The $11 million *Western Endeavor* arrived in 1987. This was followed by the 4,034-GRT super trawler *Veronica* and the 4,042-GRT *Atlantean II* which were delivered in 1988. These ultra-modern vessels established Ireland as a major fishing power in the North Sea. It was reported that the Irish Government was planning to spend $179 million for the development of Irish fisheries, including purchase of bigger vessels in 1990. The Irish high-seas fleet included 8 pelagic vessels registering nearly 12,000-GRT in 1992. Some of these vessels could be sold; indeed, the *Atlantean II* was sold shortly after it was delivered. These vessels could also be shifted to distant-water fishing grounds where they would be able to operate efficiently. To date, however, the skippers of these vessels have operated only in the North Atlantic.

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1. General Background

Irish waters are rich with fish and attracted fishing fleets from Holland, Spain, France, England, and Scotland well before Irish fishermen began harvesting fish off their shores.[1] Irish fishermen have a short tradition of inshore fishing.[2] The An Bord Iascaigh Mhara (BIM, or the Irish Sea Fisheries Board) was established in 1952 and was charged with assisting in the growth of the fishing industry. Ireland joined the EC in 1972 and extended its Exclusive Economic Zone (EEZ) to 200 miles in 1976, excluding many of the nations that once fished within a few miles of the Irish coast. Irish fishermen were disappointed when the nation joined the Community because they received a very small quota in comparison to other EC member states. The EC provides catch quotas based on historical catches; the small fleets of wooden dayboats caught comparatively little fish as compared with other EC countries.[3] Thus Ireland was allowed to fish a quota that is less than 5 percent of the fishery resources inside it's own 200-mile limit. This has caused complaints by Irish fishermen who see Spanish and other EC vessels fishing in "their" waters[4] and who compare their small quota against the 38-percent awarded to the United Kingdom.[5] The Irish have since argued their case at the EC for more favorable treatment. It was, thus, especially rewarding to Ireland when the EC Council of Ministers, in December 1992, reached agreement on a revised Common Fisheries Policy (CFP) which was favorable to the Irish; Ireland was the only European nation to win concessions.[6] An overview of the Irish fishing industry can be seen in tables 1-3.

2. Fleet Background

The Irish fishing industry consists of about 1,200 small, low horse-power, inshore vessels. The high-seas fleet began in 1976 when Irish fishing interests purchased a 1,921-GRT vessel and a 1,110-GRT vessel in 1977. These 2 high-seas vessels remained in operation until 1980 when they were decommissioned. In 1981, four smaller vessels (averaging 566-GRT) were added to the fleet and this number has since fluctuated slightly. The Irish, under the EC's Multi-Annual Guidance Policy (MAGP), has been required to reduce the size of their fishing fleet. Irish fishermen and administrators have loudly complained that these historical figures have hurt Irish fisheries and called for more liberal treatment in the future. Irish fishermen decided to alter the situation by building new vessels that would allow them to fish non-quota species (such as blue whiting, argentines, and scad), as well as horse mackerel, mackerel, and herring.[7] They did this by ordering the construction of large purse seiners and stern trawlers from foreign shipyards. The *Atlantic Challenge* was the first of several ultramodern ships that were delivered in 1986. The vessel reportedly was financed entirely by Irish fishermen and was designed to harvest non-quota species. The $11 million *Western Endeavor*, also financed entirely by a Killybegs fisherman, followed in 1987. This was followed by the arrival of the 4,034-GRT super trawler *Veronica* and the 4,042-GRT *Atlantean II*. These vessels were built in Swedish and Norwegian shipyards[8] and were also designed to fish for non-quota species. The arrival of these ultra-modern vessel established Ireland as a major fishing power in the North Sea It was reported that the BIM was planning to spend $179 million for the development of the Irish fisheries, including purchase of bigger vessels in 1990.[9] The Irish high-seas fleet included 8 vessels in 1992.

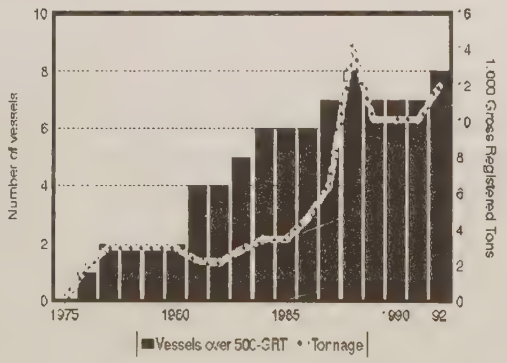

Figure 1. Ireland's high-seas fleet, 1975-92.

3. Modernization Programs

The BIM provids funds to fishermen as part of the Marine Credit Plan and has done so since 1963.[10] In 1981, the Board approved 378 applications for funding. In that year, a total of $29 million was spent on the construction of 10 vessels. The EC's European Agricultural Guidance and Guarantee Fund (FEOGA) also approved 14 projects for funding in 1981. Since the inception of the FEOGA program a total of 118 Irish vessels have received funding since 1981.[11] Most of these funds appear to have been spent on the construction or modernization of vessels under 500-GRT. In 1987, the EC brought into force Regulation No. 4028/86 which established guidelines for the construction and modernization of EC fishing fleets. The new regulation permitted the construction of larger fishing vessels than was the case in the past. The BIM approved grants for the construction of 22 new fishing vessels in 1990. The EC, under Regulation No. 4028/86, was providing funding for 43 projects involving the construction or modernization of Irish fishing vessels.[12] As in previous years, the funds were used to build or modernize fairly small fishing craft. The BIM provided $4.0 million in grants and loan financing for the construction of 6 new vessels and modernization of 96 old vessels during 1992.[13] The EC also contributed $1.9 million for fleet modernization during 1992, but this was only half the amount requested; no EC funds were made available for new vessel construction because of the decision by the EC to temporarily cease new vessel grants until member states began to decrease the size of their fleets.[14]

Irish authorities have also unveiled programs to open up non-quota species to Irish fishermen. A great emphasis has been placed on developing aquaculture projects, for example, because they do not conflict with traditional fisheries. Ireland has made significant progress in developing salmon, mussel, and oyster culture. BIM authorities have also helped fishermen find new species, such as crab, that can be sold in European markets. BIM technicians have also worked with local fishermen to experiment with different types of fishing gear that will allow fishermen to catch different species of fish.

4. Decommissioning Programs

Ireland, as a member of the EC, is required to comply with the MAGP established by the EC to reduce the size of member state fishing fleets. Most of the day boats in the Irish coastal fleet are already old and in need of replacement. The BIM imposes tough standards which require those seeking to build new vessels to decommission the equivalent tonnage of old vessels before a new permit is issued.

5. Shipyards

Ireland has some shipyards able to produce wooden or steel-hulled fishing vessels. Irish shipyards produce mainly vessels under 500-GRT.

6. International Agreements

Ireland is a member of the European Community and is subject to international agreements negotiated by the EC. Ireland does not have any bilateral fishery agreements with any other country.

7. Fleet Dispersal Plans

There are only 8 high-seas fishing vessels on the register of Irish vessels. Most other Irish vessels are fairly small, coastal boats. The high-seas fleet has been fairly stable in recent years, but one vessel, the 4,042-GRT stern trawler *Atlantean II.* was sold in 1989 to a Liberian holding company.[15] The authors are not aware of any plans to sell any of the remaining fleet of high-seas vessels. The *Atlantic Challenger*, at 8 years, is now the oldest in the fleet. It is unlikely that the ship will be sold, unless the owners are interested in building a new vessel; in that case they must decommission the vessel before they will be allowed to replace it. The authors believe that this is unlikely for the immediate future. It was reported that Ireland's largest stern trawler, the *Veronica*, had caught fire and was being towed to Norway in August 1993.[16]

SOURCES

Allen, Hugh. "Ireland must unite her talents," *World Fishing*, March 1993

EC, Regional impact of the EEC's fisheries policy - Economic and social situation and outlook for the fisheries sector in certain regions of the Community: Ireland," *Commission of the European Communities*, International Information on Fisheries, May 1980.

Fishing News International, various issues.

Fitzgerald, Roger. "Ireland's green thumb touches the sea," *Seafood Leader,* Spring 1988, p. 102.

Florio, Donna. "Expansion on the Emerald Isle," *Seafood Business,* March/April 1991, p. 54.

Heskin, Alex. "The Development of a fishery: The Irish example," Bord Iascaigh Mhara, Dublin, Ireland, printed in *Proceedings of the International Seafood Trade Conference*, Anchorage, Alaska, September 8-12, 1982, Alaska Sea Grant Report No. 83-2, January, 1983.

Irish Sea Fisheries Board, "Annual Report and Accounts, 1981," Dublin, 1982.

Irish Sea Fisheries Board, "Annual Report, 1990," Dublin, 1992.

MacSweeney, Tom. "Ireland's forward drive," *Seafood International,* May 1990, p.26.

The Sectoral Development Committee Report, *Irish Fisheries Organization News*, attachment, October 1984.

World Fishing, various issues.

Table 1.--IRELAND. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	No.	GRT	No.	GRT	No.	GRT	No.
1975	-	-	-	-	-	-	0	0
1976	-	-	1,921	1	-	-	1,921	1
1977	-	-	3,031	2	-	-	3,031	2
1978	-	-	3,031	2	-	-	3,031	2
1979	-	-	3,031	2	-	-	3,031	2
1980	-	-	3,031	2	-	-	3,031	2
1981	2,264	4[a]	-	-	-	-	2,264	4
1982	2,130	4	-	-	-	-	2,130	4
1983	2,880	5[b]	-	-	-	-	2,880	5
1984	3,426	6	-	-	-	-	3,426	6
1985	3,426	6[c]	-	-	-	-	3,426	6
1986	2,890	5[d]	1,672	1[e]	-	-	4,562	6
1987	2,890	5	3,552	2[f]	-	-	6,442	7
1988	2,347	4	3,690	2	8,076	2[g]	14,113	8
1989	2,347	4	3,690	2	4,034	1[h]	10,071	7
1990	2,328	4	3,690	2	4,034	1	10,052	7
1991	2,328	4	3,708	2	4,034	1	10,070	7
1992	2,328	4	5,606	3	4,034	1	11,968	8

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, UK, various years.

[a] Includes the stern trawlers *Atlantean, Antarctic, Sheanne,* and *Western Viking* which were all reported in 1981. Another vessel, the *Paula,* is thought to be the 5th vessel in this class of vessel, but only 4 vessels are identified by *Lloyd's Register of Shipping Statistical Tables* for 1981.

[b] The new addition could be either the *Jasper Sea* or the *Paraclete.*

[c] Includes the *Antarctic, Atlantean I, Jasper Sea, Western Viking, Sheanne*, and *Paraclete.* The vessels average 571-GRT in tonnage.

[d] It is possible that the *Atlantean* was decommissioned in 1986. The vessel was replaced by the *Atlantean II* in 1988.

[e] The *Atlantic Challenge (1,672-GRT)*, a purse seiner built at the Mjellem & Karlsen yard in Bergen, Norway The owners planned to concentrate on non-quota species, such as blue whiting and scad. The ship was delivered in April 1986.

[f] Possibly the *Western Endeavor.*

[g] The super trawler, *Veronica* (4,034-GRT), built by the Marstrandsverben yard in Sweden and the *Atlantean II* (4,042-GRT) built in Norwegian shipyards. The two ships were designed to fish for non-quota species as well as herring and mackerel.

[h] The *Atlantean II* was sold to the Lira Shipping Corporation of Liberia and was subsequently leased to a Soviet-owned fishing company which renamed it the *Novator.* The sale was necessary because the Irish owners wanted to build a bigger vessel, but were required to sell the ship in order to receive a new quota under current Irish regulations. No replacement of the vessel has been reported.

Table 2.--IRELAND. Overview of the fishing industry, 1983-92

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	35,501	43,692	40,000E	40,000E	40,000E	40,000E	40,000E	40,000E	40,000E	40,000E
Total fishing fleet (Number of vessels)	1,566	1,545	1,596	1,398	1,200E	1,200E	1,200E	1,200E	1,200E	1,200E
High-seas fleet (Number of vessels)	5	6	6	6	7	8	7	7	7	8
High-seas fleet (GRT)	2,880	3,426	3,426	4,562	6,442	14,113	10,071	10,052	10,070	11,968
Catch (Metric Tons)	203,400	209,992	230,692	231,543	250,681	255,725	200,386	218,512	240,703	240,000E
Fishermen (Number)	8,532	8,600	7,019	7,000E	7,000E	11,179	12,420	12,000E	12,000E	12,000E

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet).

Table 3.--IRELAND. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	Negl.	Negl.	0.6	0.4	0.7	0.7	0.6	0.7	0.8
Coastal[1] (Northeastern Atlantic and Baltic Sea, FAO area 27)	79.0	149.4	230.2	231.1	250.1	255.0	200.0	217.8	239.9
Distant-water (Northwestern Atlantic, FAO area 21)	6.0	-	-	-	-	-	-	-	-
Total	85.0	149.4	230.8	231.5	250.8	255.7	200.6	218.5	240.7

Source: FAO, *Yearbook of Fishery Statistics*, various years.

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[1] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

ENDNOTES

1. Dutch fishermen reportedly were fishing off Ireland in 1442. Alex Heskin, "The Development of a fishery: The Irish example," Bord Iascaigh Mhara, Dublin, Ireland, printed in *Proceedings of the International Seafood Trade Conference*, Anchorage, Alaska, September 8-12, 1982, Alaska Sea Grant Report No. 83-2, January, 1983.

2. Alex Heskin, "The Development of a fishery: The Irish example," Bord Iascaigh Mhara, Dublin, Ireland, printed in *Proceedings of the International Seafood Trade Conference*, Anchorage, Alaska, September 8-12, 1982, Alaska Sea Grant Report No. 83-2, January, 1983.

3. EC, Regional impact of the EEC's fisheries policy - Economic and social situation and outlook for the fisheries sector in certain regions of the Community: Ireland," *Commission of the European Communities*, International Information on Fisheries, May 1980. This document provides an in depth analysis of the Irish fisheries in the 1960s and 1970s.

4. The EC reportedly obtains 25 percent of its total catch from waters off the Irish coast while Irish fishermen are allowed to harvest only 4 percent of this fish. See: Donna Florio, "Expansion on the Emerald Isle," *Seafood Business,* March/April 1991, p. 54.

5. Roger Fitzgerald, "Ireland's green thumb touches the sea," *Seafood Leader,* Spring 1988, p. 102.

6. Hugh Allen, "Ireland must unite her talents," *World Fishing*, March 1993, p. 26. The Irish were granted an extra 7,500 ton allocation of mackerel and gained a further 300 tons of haddock. They were also allowed to increase the size of the fleet by 3,000 tons to a total of 52,000 tons.

7. Mackerel and herring are quota species.

8. Financing for the *Veronica* reportedly was arranged by the Norwegian shipyards in cooperation with the Christiana Bank.

9. Tom MacSweeney, "Ireland's forward drive," *Seafood International,* May 1990, p.26.

10. The Sectoral Development Committee Report, *Irish Fisheries Organization News*, attachment, October 1984.

11. The *Irish Sea Fisheries Board,* "Annual Report and Accounts, 1981," Dublin, 1982.

12. *The Irish Sea Fisheries Board*, "Annual Report, 1990," Dublin, 1992.

13. "Irish fishing industry," *World Fishing*, March 1993, p. 21.

14. "Irish fishing industry," *World Fishing*, March 1993, p. 21.

15. The vessel was sold to the Lira Shipping Corporation of Liberia, which leased the ship to a Soviet-owned fishing company, which renamed the ship the *Novator.*

16. "Last bids for the Freezer *Genesis*!," *Fishing News International,* August 1993, p. 42.

2.7

ITALY

The Italian high-seas fleet of 27 vessels is expected to decline by 1-4 vessels during the next few years. These vessels will be sold to third parties and probably will not be replaced. The authors do not anticipate a sudden shift in Italy's high-seas fleet from their current fishing grounds off West Africa. There is a possibility that Italian fishermen may wish to engage in a high-seas tuna fishing operation as consumption of tuna in Italy has increased in recent years.[1]

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1. General Background

Italy is the second largest country in the EC in terms of population, after Germany. The country's 7,456 kilometer coastline borders the Adriatic, Aeonian, Ligurian, Tyrrhenian, and Mediterranean Seas. Its maritime boundaries touch on those of the newly independent Slovenia, Albania, Greece, Libya, Tunisia, Malta, Spain, and France. The Italian fishing fleet is the third largest in the EC after Greece and Spain. Most of these are small, coastal vessels that are manned by one- or two-man crews. The Italian coastal fishery expanded slowly following World War II, despite limited resources and increasing pollution, especially in the Adriatic Sea which has been subject to massive algae blooms in recent years. The Italian high-seas fleet was in operation before the start of World War II. The fleet reportedly included 12 vessels registering 5,000 GRT (an average of 417-GRT per vessel). By 1975, the extension of fishery zones off West African had begun to impact the Italian fishing fleet in the region; the number of vessels declined from 95 to 65 vessels between 1973 and 1975.[2] Italy's 60 million consumers enjoy eating seafood, especially sole, plaice, hake, red mullet, sea bass, cuttlefish, squid, rainbow trout, and a variety of mussels.[3] Consumption of seafood averages about 15 kilograms per capita.[4] The Italian fisheries catch has declined during the past few decades to slightly over 500,000 tons. Imports have increased going from 368,000 tons in 1988 to 410,000 tons in 1992.[5] Exports remain small and stable: 67,000 tons in 1988 to 73,000 tons in 1992.[6] An overview of the Italian fishing industry can be seen in tables 1-3.

2. Fleet Background

Italian shipyards produced a series of efficient stern trawlers during the 1960s for operation outside the Mediterranean, mostly along the coast of West Africa.[7] Some of these pioneering vessels included the *Aspa Quareto* (1,600-GRT) built in 1965 by Cantieri Navale Apuania S.A. A smaller vessel, the *Andrea Speat* (630-GRT) was also built in 1965 by Cantiere Navale di Pesaro. The shipyard built the *Luca Speat* (780-GRT) in 1987. *Nembo* (850-GRT) and *Pelago* (850-GRT) were built in 1967 for operations off West Africa. The *Storione* (1,233-GRT) also was launched in 1978. Two years later, the *Tontini Pesca Terzo* (1,580-GRT) was built along with the *Airone* (1,251-GRT). By 1977, the Italian high-seas fleet included 19 vessels licensed to fish inside the 200-mile EEZ off the United States (see table below). These vessels ranged in size from the 3,600-GRT trawler *Assunta Tontini Madre* down to the 622-GRT *Niccla Specchio*. All of these vessels were less than 10 years old, making the Italian high-seas fleet one of the most modern in the world at that time. In 1971, the *De Giosa Guiseppi* (900-GRT) was built by Soc. Esercizio Cantieri as part of a series of ships which numbered at least 7 vessels: the seventh vessel was named the *Carlo di Fazio*. The series of stern trawlers built by Italy helped establish that country as a producer/operator of very fine fishing vessels. In 1979, the Societia Esercizio Cantieri SPA launched the *Sheketeh* (1,600-GRT) freezer stern trawler for the State Fishing Corporation of Tema, Ghana and the Anzika, a tuna purse seiner for the Congo.[8] The United States became a customer of 8 tuna seiners in December 1981.[9] In 1983, Italian shipyards launched the tuna seiners, *Bonnie* and *Jennifer* (1,000-GRT) for customers in Mexico; the vessel was one of many vessels ordered by clients from Algeria, the United States, Somalia, and Angola.[10] The high-seas fleet included 26 vessels over 500-GRT by 1984.[11] These vessels were operating in Angola, Benin, Guinea, Guinea (Bissau), Nigeria, Senegal, Sierra Leone, Somalia, and the United States and reportedly harvested 40,0000 tons of fish and shellfish.[12] Despite the rapid growth of the Italian high-seas fleet in the 1970's, the fleet was buffeted by losses. From a highpoint of 60 vessels (57,000-GRT) in 1975 the fleet has steadily declined to about 27 vessels (26,000-GRT) in 1992. Most reports dealing with Italy point to the extension of the 200-mile regimes in the mid-1970s as one of the reasons for this decline. However, the trend has been consistently downwards without any sudden changes. Also, unlike many other countries, Italian fishermen did not significantly increase the size of the high-seas fleet during the years 1986-89.[13] The pride of the Italian high-seas fleet, the *Assunta Tontini Madre* (3,817-GRT) fished for squid off the United States until 1983 when it was sold to the Faroe Islands; the vessel was the largest in its class and was never replaced.

3. Modernization Programs

Italy's first fisheries development plan was officially announced in Act No. 41 of February 17, 1982 The program was part of a plan to modernize Italy's fishing industry and required the government to prepare a new national plan for fisheries every three years.[14] These programs were later supplemented by similar programs managed by the EC. The Campbell Shipyards in San Diego, California delivered the *Rio Mare* (1,500-GRT), a Super Pacific Class tuna seiner for Italy in 1991.[15] The *Rio Mare* is one of the few new ships added to the Italian high-seas fishing fleet in recent years. It was only 10 years ago that Italian shipyards were producing tuna seiners for the U.S. tuna fishing fleet.

4. Decommissioning Programs

Italy, as an EC member state, was required to trim the size of the nation's fishing fleet starting in 1986. The original plan was to reduce the number of vessels to the size of the entire fishing fleet in 1983. Most of the reduction in the Italian fleet was aimed at trimming the size of the small coastal fleet that operated in the Adriatic and around Sicily.[16] In 1987, the EC again outlined a plan to reduce the size of the Italian fleet which also called for the reduction of the high-seas fleet.[17]

5. Shipyards

Italian shipyards have produced first class fishing vessels for years. These shipyards have a reputation for building excellent fishing vessels that have attracted buyers from around the world. Information on Italian shipyards in recent years is scant, but there is nothing to suggest that Italian shipyards could not resume building new vessels if the Italian industry decided to rejoin the high-seas fisheries.

6. International Agreements

Italy began fishing off the coasts of many African nations before it became a member of the EC and before the EC received permission to negotiate international fishery treaties on behalf of member states. The EC has since initiated bilateral agreements with almost all of the countries where Italian vessels once fished. Italian fishing vessels first began fishing off the United States in 1972, for example, where it reportedly caught an average of 16,000 tons of squid annually.[18] Nineteen Italian vessels were licensed to fish in U.S. waters in 1977 following the extension of U.S. waters to 200-miles (see table below). Italian vessels were also fishing for squid and cod off the coast of Canada and were allowed to fish for hake off the Namibian coast.[19] The agreement with the United States, like those of other countries, was replaced by an agreement with the European Community once that body was given permission to negotiate international fishery agreements by its member states. The Americanization of United States fisheries gradually led to the phase-out of Italian fishing in U.S. waters on January 1, 1987. Although the EC has replaced Italy as the competent authority for negotiating international agreements, Italian fishermen were permitted to continue privately fishing initiatives with Sierra Leone (4 vessels), Nigeria (4 vessels), and Somalia (2 vessels) as late as 1983.[20] Italy's bilateral fisheries agreement with Yugoslavia was extended for 6 months in 1978, but was later terminated.[21]

Italian high-seas vessels reportedly caught 65,900 tons in distant-waters in 1991 (Table 3). The majority of this catch was in the Central Eastern Atlantic region of West Africa where EC agreements allow Italian vessels to fish under license. A smaller quantity (less than 10,000 tons) was harvested in the Southwestern Atlantic Ocean around the Falkland Islands (see appendix 29-31). Finally, the Italian fleet caught 16,500 tons in the Western Indian Ocean; this was not, however, tuna. The Italians did, however, briefly fish for southern bluefin tuna (*Thunnus maccoyii*) in the Western Indian Ocean in 1987-90 with a total catch of 707 tons for the entire 4 years.[22] The Italian catch in the Indian Ocean in 1991 consisted of a variety of different marine fish and shellfish suggesting the operation of a fleet of small vessels.[23] The authors have no information about Italy's fisheries in the Indian Ocean. Somali sources, however, recently reported that "pirate trawlers" from Italy and other countries are illegally fishing at night for lobster, crab, and tuna in Somali waters. No documentation exists for this claim made by Mohamed Abshir Muse of the Somali Salvation Democratic Front.[24]

7. Fleet Dispersal Plans[25]

The Italian 1992 high-seas fleet of 27 vessels will doubtlessly continue to decline by 1-4 vessels per year for the next few years pending some unforeseen development. These ships will be sold to third parties and probably will not be replaced. The authors do not anticipate a sudden shift in Italy's high-seas fleet from their current fishing grounds off West Africa.

Consumption of tuna has increased in Italy in recent years[26] and it is possible that Italian fish processing firms might be interested in establishing a high-seas tuna fishing venture similar to those operated by Spain and Italy. Italy, as an EC member, is eligible for allocations of tuna off West Africa or in the Indian Ocean. Italian fishermen have experience fishing for tuna off West Africa and it would be fairly easy for them to begin fishing tuna.

SOURCES

"Campbell launches first tuna seiner for Italy," *News Release*, Campbell Shipyard, San Diego.

DiPalma, Salvatore. U.S. Regional Fisheries Attache in Copenhagen, Denmark to William L. Sullivan, Jr., February 13, 1975.

Eurofish Report, various issues.

FAO, *Yearbook of Fishery Statistics - Catches and landings, 1991*, Vol. 72, United Nations, Rome, Italy, 1993.

Fishing News International, various issues.

Folsom, William B." Italian canned tuna industry, 1989," *International Fisheries Report,* IFR-90/91, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Silver Spring, MD, December 26, 1990.

Hjul, *Peter* (Editor). *The Stern Trawler*, Fishing News (Books) Ltd. London, 1972

"Italy's International Fishing Relations, *International Fisheries Report*, IFR-78/12, Office of International Fisheries, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., January 20, 1978.

La Pêche Maritime, various issues.

Murphy, Yvette and Gian Franco Carrettoni, "Benvenuti in Italia," *Seafood International*, September 1993.

"Somalia: Fish pirates," *Seafood Leader*, July/August 1993, p. 62.

U.S. Embassy, Rome, various reports.

World Fishing, various issues

Italy

300 km
Milan
Venice
Turin
Genoa
Bologna
Adriatic Sea
Florence
ROME
Bari
Naples
Sardinia
Tyrrhenian Sea
Cagliari
Ionian Sea
Palermo
Mediterranean Sea
Sicily
Reggio di Calabria

Table 1.--ITALY. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	**Gross Registered Tons (GRT)**						**Total**	
	500-999		**1,000-1,999**		**Over 2,000**			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	26,157	38	30,889	22	-	-	57,046	60
1976	25,657	37	27,856	20	4,000	1	57,513	58
1977	24,386	35	26,486	19	4,000	1	54,872	55
1978	23,277	33	25,109	18	3,817	1	52,203	52
1979	21,709	31	25,412	18	3,817	1	50,938	50
1980	21,709	31	23,769	17	3,817	1	49,295	49
1981	16,935	24	20,616	15	3,817	1	41,368	40
1982	16,009	22	21,629	16	3,817	1	41,455	39
1983	15,190	21	18,952	14	3,817[a]	1	37,959	36
1984	14,292	20	18,602	14	-	-	32,894	34
1985	14,619	20	16,339	12	-	-	30,958	32
1986	13,346	18	16,339	12	-	-	29,685	30
1987	13,688	18	17,644	13	-	-	31,332	31
1988	13,688	18	17,644	13	-	-	31,332	31
1989	13,688	18	16,402	12	-	-	30,090	30
1990	13,688	18	16,402	12	-	-	30,090	30
1991	13,073	17	16,402	12	-	-	29,475	29
1992	13,073	17	13,163	10	-	-	26,236	27

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

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[a] The 3,817-GRT stern trawler, the *Assunta Tontini Madre,* Italy's largest fishing vessel, was built in Viareggio in 1976 and fished for squid off the Atlantic coast of the United States. The ship was sold to Faroese fishing interests in 1986.

Table 2.--ITALY. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch in metric tons, and vessels tonnage in gross registered tons									
Total fishing fleet (GRT)	257,767	260,512	266,401	267,516	273,678	273,693	263,165	260,000E	260,000E	260,000E
Total fishing fleet (Number of vessels)	19,099	26,537	26,780	19,751	19,831	19,756	18,433	18,000E	18,000E	18,000E
High-seas fleet (Number of vessels)	36	34	32	30	31	31	30	30	29	27
High-seas fleet (GRT)	37,959	32,894	30,958	29,685	31,332	31,332	30,090	30,090	29,475	26,236
Catch (Metric Tons)	552,141	579,424	590,487	569,344	561,913	576,166	548,947	519,922	548,242	510,000
Fishermen (Number)	34,000	37,000	40,000E	40,000E	55,090	54,450	55,000E	55,000E	55,000E	55,000E

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet).

Table 3.--ITALY. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	19.1	34.5	48.2	50.6	55.2	58.2	61.4	57.3	56.7
Coastal Mediterranean, FAO area 37	352.0	353.0	500.6	471.1	447.8	452.6	418.6	405.9	425.7
Distant-water:									
NW Atlantic, FAO area 21	4.4	9.4	8.6	7.4	0	0	0	0	0
Northeastern Atlantic and Baltic Sea, FAO area 27	0	2.4	.4	0	0	0	0	0	0
Western Central Atlantic, FAO area 31	0	0	1.2	0	0	0	0	0	0
Eastern Central Atlantic, FAO area 34	19.0	33.0	26.3	35.0	40.8	44.3	51.9	33.8	39.5
South Western Atlantic, FAO area 41	0	0	0	1.0	6.0	10.7	6.3	8.5	9.9
South Eastern Atlantic, FAO area 47	11.3	3.3	4.1	4.2	6.1	5.7	4.7	0	0
Western Indian Ocean, FAO area 51	0	13.0	.7	0	6.0	4.5	6.0	14.5	16.5
Sub-total	34.7	61.1	41.3	47.6	58.9	65.2	68.9	56.8	65.9
Total	405.8	448.6	590.1	569.3	561.9	576.0	548.9	520.0	548.3

Source: FAO, *Yearbook of Fishery Statistics*, various years.

ENDNOTES

1. See: William B. Folsom, "Italian canned tuna industry, 1989," *International Fisheries Report,* IFR-90/91, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Silver Spring, MD, December 26, 1990.

2. Letter from Salvatore Di Palma, U.S. Regional Fisheries Attache in Copenhagen, Denmark to William L. Sullivan, Jr., February 13, 1975.

3. Yvette Murphy and Gian Franco Carrettoni, "Benvenuti in Italia," *Seafood International*, September 1993, pp. 28-29.

4. "Italian fish production and consumption erratic," *Eurofish Report,* June 17, 1993, p. SP/2.

5. "Italian fish production and consumption erratic," *Eurofish Report,* June 17, 1993, p. SP/2.

6. "Italian fish production and consumption erratic," *Eurofish Report,* June 17, 1993, p. SP/2.

7. Peter Hjul, *The Stern Trawler*, Fishing News (Books) Ltd. London, 1972, pp. 157-160.

8. W*orld Fishing*, March 1979.

9. "USA tuna seiners from Italian yard," *Fishing News International,* November 1981.

10. *La Pêche Maritime*, February 20, 1983, p. 101.

11. "Italie: La flotte de pêche lointaine: 41 bateaux caputurant 40 000 t," *La Pêche Maritime*, December 20, 1984, p. 677. This number does not agree with the number reported by *Lloyd's Register.*

12. "Italie: La flotte de pêche lointaine: 41 bateaux caputurant 40 000 t," *La Pêche Maritime*, December 20, 1984, p. 677.

13. One vessel (1,305-GRT) was, however, added to the high-seas fleet in 1987.

14. "Italy curbs fleet with licensing," *Fishing News International*, October 1988, p. 51. An excellent, indepth study of the Italian program to modernize the fishing industry is available in: "Italy...an OECD profile," *World Fishing*, February 1991, pp. 19-21.

15. "Campbell launches first tuna seiner for Italy," *News Release*, Campbell Shipyard, San Diego.

16. "Le plan de restructuration de la flotte de pêche," *La Pêche Maritime*, June 1985.

17. "Le plan 1987-1991," *La Pêche Maritime*, April 1988, p. 245.

18. "Italie: La flotte de pêche lointaine: 41 bateaux caputurant 40 000 t," *La Pêche Maritime*, December 20, 1984, p. 677.

19. "Italian distant-water fleet concentrated in US waters," *Eurofish Report*, August 16, 1984, p. FS/2.

20. "Possible USG west African fisheries initiative," U.S. Embassy, Rome, September 16, 1983. No information is available on when these private agreements expired.

21. An interesting examination of Italy's foreign relations up to 1978 can be obtained from "Italy's International Fishing Relations, *International Fisheries Report*, IFR-78/12, Office of International Fisheries, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., January 20, 1978.

22. FAO, *Yearbook of Fishery Statistics - Catches and landings, 1991*, Vol. 72, United Nations, Rome, Italy, 1993.

23. The 1991 catch in the Western Indian Ocean included scorpionfish, seabreams, porgies, cuttlefish, common squids, etc.

24. "Somalia: Fish pirates," *Seafood Leader*, July/August 1993, p. 62.

25. This section was reviewed by the Director of EC and International Relations for the Italian Ministry of the Merchant Marine who reported that the NMFS analysis was accurate. "National Marine Fisheries Service World Fleet Study," U.S. Embassy Rome, August 13, 1993.

26. Yvette Murphy and Gian Franco Carrettoni, "Benvenuti in Italia," *Seafood International*, September 1993, pp. 29.

2.8

NETHERLANDS

The Dutch operate some of the largest fishing vessels in the world, including 13 super-seiners and stern trawlers that can fish anywhere in the world for extended periods of time. Some of these ships have fished off the Falklands, Morocco, Peru, and Argentina. These vessels are all fairly new to the Dutch fleet; the super-trawlers *Astrid* and *Holland* were built in 1986. The pelagic super-seiner *Cornelis Vrolijk Fzn* (at 6,500-GRT) was launched in 1988. It was followed by the *Franziska, Dirk Diederik* and *Zeeland*. All are ultra-modern vessels able to catch, freeze, and transport large quantities of fish to distant markets. These Dutch vessels for herring, horse mackerel, mackerel and silver smelt in the North Sea. They are, however, capable of harvesting other species; they have the capacity to fish anywhere in the world. Three Dutch vessels were reflagged in Panama and another 3 vessels in Cyprus in 1993.

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1. General Background

The Dutch have fished for centuries[1] and Holland's 15 million citizens enjoy eating seafood and are willing to pay premium prices for fresh fish, shellfish, and other seafood products, although herring is the most prized species in Holland.[2] Thanks to growing affluence, Dutch per capita consumption of fish and shellfish reached 14.2 kilograms in 1990.[3] Dutch fishermen landed over 434,000 tons of fish and shellfish in 1992, making Holland the sixth largest fishing nation in the European Community. Plaice, sole, herring, mackerel, horse mackerel, cod, shrimp, mussels, and cockles are important species harvested by Dutch fishermen. Dutch entrepreneurs export fresh and value-added seafoods to markets around the world; the value of Dutch fishery exports went from $512 million in 1980 to $1.4 billion in 1991.[4] Modern fishing vessels, ports, processing plants, and transport facilities make the Netherlands a vital link in intra-European trade.[5] The Dutch fleet in 1990 included 573 coastal vessels (called "cutters"), 148 dredgers (which harvest cockles, mussels, and oysters), 27 stern trawlers and/or beamers, and 14 high-seas trawlers.[6] The high-seas vessels can either fish or operate as a "klondykers" (buying fish caught by others), processing and delivering the catch to distant ports as a "reefer" (refrigerated transport). Dutch coastal fisheries are tightly regulated and the Dutch government is attempting to reduce the size of the coastal fleets in compliance with EC directives. By all standards, the Dutch fishing fleet is considered very modern and cost-effective.[7] Dutch fishermen also have a reputation for overfishing among other European fishermen.[8] This may be attributed to the size and efficiency of some of Holland's newest vessels which fish for mackerel, horse mackerel, and herring in EC waters and on the high-seas.[9] Dutch officials report that 1990 and 1991 were very profitable for Dutch fishermen, thanks to increasing prices for fish and shellfish on the Dutch and export markets. An overview of the Dutch fishing industry can be seen in tables 1-3.

2. Fleet Background

Dutch fishermen faced many of the difficulties encountered by other European fishermen in the 1970s and 1980s. These included a relatively short coastline of some 367 kilometers, a large fleet of small, aging vessels, reliance on distant fishing grounds (in the English Channel, North Sea, and off Ireland) and the loss of some of these fishing grounds when many nations decided to extend their jurisdictions out to 200-miles. Dutch fishermen also had to deal with increasingly strict fish quotas and the problems of overfishing, rising fuel prices, and unstable prices for fish products in the 1970s and early 1980s. The Dutch reacted to the challenge by (1) increasing their imports of fish and shellfish, and (2) by modernizing their fisheries. The commitment to modernization can be seen in the development of their high-seas fishing fleet.

Dutch fishermen were among the first Europeans to build and operate high-seas fishing vessels. The *Yke* (540-GRT), the *Cornelis Vrolijk Fzn* (606-GRT), and the *Zeehaan* (559-GRT) are stern trawlers built in Dutch shipyards in 1966.[10] The *Cornelis Vrolijk Fzn* was a popular name, since another trawler bearing that name was built in 1980; a 1,840-GRT vessel described as a "jumbo-sized freezer stern trawler" when the ship was delivered. The ***Boeier,*** a new high-capacity freezer trawler from the Ysselwerf Shipyard near Rotterdam, was also delivered in 1980. In 1981, several new Dutch-built stern trawlers were launched, including: *Annie Hillina, Schoener, Johanna Maria,* and *Klipper.*[11] These new vessels were designed to fish for herring, horse mackerel, and mackerel. The Dutch catch of mackerel went from 11,100 tons in 1971 to an estimated 96,000 tons in 1982. Much of the mackerel catch was delivered to clients in Africa, mostly in Nigeria.[12] In 1983, the Dutch began discussions with the United States and started fishing off the Atlantic coast of the United States in 1984.[13] This was the same year that the *Alida* was delivered to A. van der Zwan of Scheveningen; the vessel was built to catch and freeze large quantities of mackerel.[14] The *Dirk Dirk* (3,019-GRT) was also delivered in 1984 and briefly held the honor of being Holland's largest fishing vessel.[15] The Netherlands had the finest fleet of fishing vessels operating anywhere in the world by 1984.[16] This was also the year that Dutch fishery officials first expressed the concern that the Dutch fleet was growing too quickly and that quotas might have to be reduced in the next few years.[17] In 1985, the supertrawlers *Astrid* and *Holland* were launched in Dutch shipyards. The *Astrid* replaced the *Dirk Dirk* as Holland's largest vessel at 98 meters in length.[18] The Dutch Government was required by the EC in 1986 to reduce the size of its fleet; most of this effort was directed at the beam trawler fleet and other vessels under 500-GRT. The Dutch high-seas fleet, which operated well beyond Holland's fishing grounds, was also affected.[19] The Dutch fleet began directing their efforts at horse mackerel and began developing markets for this fish in Africa and Asia in 1986.[20] Dutch fishermen took delivery of the *Tetman Hette* from the Polish Centromor shipbuilding organization in July 1988. The ship was a B-674-class freezer trawler designed to fish for herring.[21] The third vessel named *Cornelis Vrolijk Fzn* (6,500-GRT) was launched in 1988.[22] The ship was too big to berth at its home port![23] The Dutch Seafrozen Fish Foundation operates the *Cornelis Vrolijk Fzn*, which was the world's largest stern trawler when it was built in the YVC Ysselwerft shipyards in Rotterdam. The vessel was able to freeze up to 250 tons per day, making it the largest pelagic fishing vessel

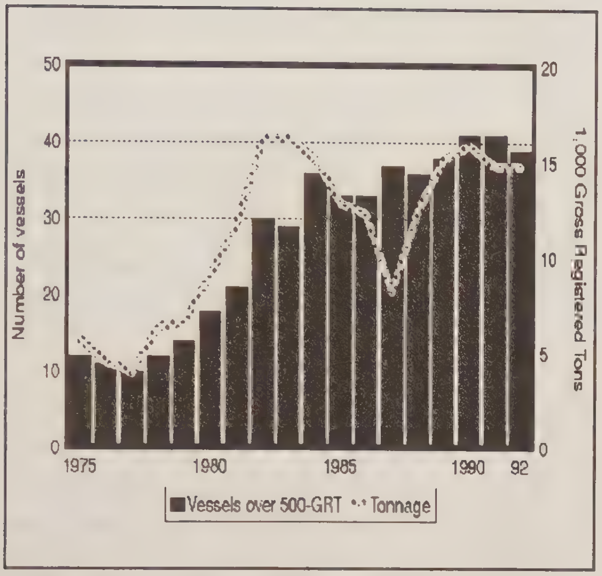

Figure 1.--The Dutch high-seas fleet, 1975-92.

operated by the Seafrozen Fish Foundation.[24] The *Franziska*, another super trawler, was also delivered to the same owners in that year. These supertrawlers are designed to operate far from home ports. The *Franziska* reportedly fished off Peru and Argentina in 1989. The vessel reportedly was fishing for mackerel, horse mackerel, herring, and silver smelt in the North Sea, Shetlands, north and west of Scotland, and west and south of Ireland in 1993.[25] Another of the supertrawlers was reported fishing off the Falklands[26] and two others off Morocco.[27] The supertrawler *Dirk Diederik* was delivered to Parlevliet & van der Plas BV from the Welgelegen shipyards in Harlingen, Holland in 1990. The ship is equipped to catch, grade, freeze, and pack up to 250 tons of herring, mackerel, and horse mackerel a day. The ship can store 5,400 cubic meters of fish at -28 degrees.[28] The ship is designed to fish in any ocean of the world and is expected to range the high-seas seeking mackerel and horse mackerel.[29] Another ship delivered in 1990 was the *Zeeland*, another super-class vessel.[30]

Cor Vrolijk of Cornelis Vrolijk announced that his firm had ordered another stern trawler to be built at the Ijsselwrf Yard YVC of Capelle aan den Ijssel near Rotterdam. The trawler will be the largest in the Dutch fleet when it is delivered in June 1994.[31]

3. Modernization Programs

Following a significant reduction between 1975 and 1979, Dutch fishermen began ordering new fishing vessels in 1980.[32] The Dutch tax system at that time encouraged fishermen to invest in larger, more efficient vessels during periods of high profitability to avoid high taxes.[33] This would explain why Dutch fishermen were investing heavily in the early 1980s, despite reportedly poor landings during the early part of the 1980s.

The Minister of Economic Affairs, Andriessen, informed the Dutch parliament on March 5, 1990, that the State had allocated $7.8 million to supplement the $49 million previously allocated to the Dutch shipbuilding industry for 1990. This brings the total Dutch shipbuilding subsidy to $57 million for 1990.[34] No funds, however, have been identified by the authors for construction of high-seas fishing vessels. Dutch authorities report that the fleet modernization program has come to a temporary end, because emphasis is now being placed on reducing the size of the Dutch cutter fleet, to bring the country into compliance with EC regulations concerning the size of national fleets.

4. Decommissioning Programs

The Dutch Government has initiated several major decommissioning schemes in the past 30 years.[35] The first apparently was undertaken in 1975 when 102 vessels were decommissioned followed by 67 additional vessels being decommissioned in 1976. Altogether, a total of 180 fishing vessels were withdrawn from Dutch registers at considerable expense to Dutch taxpayers.[36] The move appears to have been caused by the loss of traditional distant-water fishing grounds and by the realization that EC quotas would not permit the Dutch to expand their fisheries. Decommissioning programs, aimed at reducing the size of the coastal fleet, continued to operate in 1991 when 30 cutters were decommissioned.

5. Shipyards

Dutch shipyards have a reputation for building some of the largest fishing vessels in the world. Dutch-built vessels are sold to clients around the world.

Dutch fleet operators are unlikely to continue to build supertrawlers in the next few years. The vessels have simply become too large for existing quotas and the trend in recent construction has been to build slightly smaller vessels.

6. International Agreements

The Netherlands is a member state of the European Community and follows EC directives concerning fishing in international waters. Dutch high-seas fishermen were allowed to fish for mackerel and other species off the east coast of the United States beginning in 1984. This operation lasted until U.S. fishermen were able to harvest these species and no surplus stocks were left for allocation to foreign fleets. The Dutch were among the first to press for the EC to obtain fishing rights in Peru and Chile.[37]

7. Fleet Dispersal Plans

The Dutch high-seas fishing fleet of 13 "super" trawlers and pelagic stern trawlers (those over 1,000-GRT) will fish or buy mostly herring or mackerel species which they will freeze, transport, and sell profitably, despite low margins. These vessels transport fish in bulk to distant markets in Africa and Asia. The Dutch may begin to target the Iranian market in the next few years.[38] This fleet will range from the North to the South Atlantic and could easily fish in the Pacific or Indian Oceans if resources become available.

In addition to these vessels, three aging Dutch fishing vessels, the *Anita I.* (365-GRT built in 1964), the *Aguas Santas* (1,505-GRT built in 1949) and the *Amazonas* (1,219-GRT built in 1948) appeared on the list of fishing vessels reflagged in Panama in 1993.[39] The authors question how the *Aguas Santas* and the *Amazonas*, both over 1,000-GRT, could profitably operate in Panamanian waters.

Four Dutch fishing vessels were also registered in Cyprus in 1993. [40] The *Eefeje* (84-GRT) and the *Jan Willem* (153-GRT) were identified as being decommissioned from EC rolls on October 24-25, 1988; both were shown to have been transferred to a third country (that was not identified).

SOURCES

BBH Corporation, "Exporting Seafood Products to Europe - Germany, the Benelux countries, and Spain," *Seafood Business Report,* 1986

Cor de Graaf, " The Dutch high-seas fishing fleet," *Marine International Fisheries Magazine*, 1986, pp. 15-16.

"Dutch build up fleet despite quota warning," *The Irish Skipper*, April 1980.

EC, Commission Decision of 24 April 1985 on the multiannual guidance program in respect of the fishing fleet submitted by the Netherlands pursuant to Council Regulation (EEC) No. 2908/83, *Official Journal of the European Communities*, No L 157/38, June 15, 1985.

Eurofish Report, various issues.

Fishing News International, various issues.

Folsom, William B. "The Netherlands Fisheries, 1985-1989," *International Fisheries Report,* IFR-90/75, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., October 26, 1990

Ford, Robert. "The Dutch Mackerel Fishery," *International Fisheries Report*, IFR 84/34, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., May 4, 1984.

Hjul, Peter (Editor), *The Stern Trawler,* Fishing News (Books) Ltd, London, 1972, pp. 167-168.

"HOLLAND: We fish in the name of God," *Fish International*, May-June, 1988

Kramer, Peter. "Holland's mighty trawlers," *Fishing News International,* September 1981

Lord, Richard. "Down to the sea with the Dutch," *Seafood Leader*, Spring 1988, p. 189.

Office of Naval Intelligence. U.S. Navy.

"Pelagics frozen on-board," *Seafood News*, July 1993, p. 14.

Seafood International, various issues.

U.S. Embassy, The Hague, various reports.

Wray, Tom. "Exports increase despite supply fears," *Seafood International*, November 1991

World Fishing, various issues.

Netherlands

75 km
North Sea
Den Helder
Leeuwarden
Groningen
Assen
AMSTERDAM
Zwolle
The Hague
Utrecht
Europoort
Rotterdam
Nijmegen
Tilburg
Eindhoven
Maastricht

Table 1.--THE NETHERLANDS. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	5,670	10	2,904	2	-	-	5,672	12
1976	4,500	8	4,437	3	-	-	4,503	11
1977	3,940	7	4,424	3	-	-	3,943	10
1978	6,316	10	3,352	2	-	-	6,318	12
1979	6,521	10	5,584	4	-	-	6,525	14
1980	9,091	14	5,584	4	-	-	9,095	18
1981	11,748	18	4,525	3	-	-	11,751	21
1982	16,191	24	7,949	6	-	-	16,197	30
1983	16,228	24	6,018	5	-	-	16,233	29
1984	15,129	23	11,662	9	11,367	4[a]	15,142	36
1985	12,829	20	9,162	7	17,709	6[b]	12,842	33
1986	12,264	20	6,031	5	22,364	8	12,277	33
1987	8,214	13	8,623	6	21,758	8	8,228	27
1988	12,493	21[c]	8,981	6	29,027	9[d]	12,508	36
1989	15,131	26	2,516	2	36,397	10[e]	15,143	38
1990	15,844	27	4,418	3	42,402	11[f]	15,858	41
1991	14,749	26	3,872	3	46,634	12	14,764	41
1992	14,749	26	1,079	1	46,634	12	14,762	39

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[a] The authors believe these to include the *Alida, Ariadne, Dirk Dirk, and the Zeeland.*

[b] Believed to include the *Astria* and *Holland*.

[c] Presumably includes the Polish-built *Tetman Hette.*

[d] Believed to be the *Cornelis Vrolijk Fzn.*

[e] Believed to be the *Fraziska.*

[f] Believed to be the *Dirk Diederik.*

Table 2.--THE NETHERLANDS. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	131,429	145,542	147,781	150,892	158,173	171,626	176,312	175,000E	175,000E	175,000E
Total fishing fleet (Number of vessels)	1,041	1,055	1,063	1,059	1,060	1,076	1,059	1,060E	1,060E	1,060E
High-seas fleet (Number of vessels)	29	36	33	33	27	36	38	41	41	39
High-seas fleet (GRT)	16,233	15,142	12,842	12,277	8,228	12,508	15,143	15,858	14,764	14,762
Catch (Metric Tons)	505,966	432,392	504,181	454,778	446,138	398,834	451,058	459,022	443,097	434,122
Fishermen (Number)	4,406	4,410	4,000E	4,000E	4,000E	3,471	3,311	4,298	4,000E	4,000E

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet).

Table 3.--THE NETHERLANDS.--Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	4.4	2.0	3.8	4.3	5.2	5.4	4.0	3.1	4.1
Coastal[g] (Northeastern Atlantic and Baltic Sea, FAO area 27)	346.1	338.4	500.3	450.5	430.0	379.6	443.0	455.9	433.0
Distant-water:									
NE Atlantic, FAO area 21	0.0	0.0	0.0	0.0	10.9	12.4	4.7	0.0	6.0
SW Atlantic, FAO area 41	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0
Sub-toal	0.0	0.0	0.0	0.0	10.9	13.9	4.7	0.0	6.0
Total	350.5	340.4	504.1	454.8	446.1	398.9	451.7	459.0	443.1

Source: FAO, *Yearbook of Fishery Statistics,* various years.

[g] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

ENDNOTES

1. The Netherlands is one of the oldest European fishing nations. See: "HOLLAND: We fish in the name of God," *Fish International*, May-June, 1988, p. 7.

2. Herring is sold fresh, marinated, pickled, salted, smoked, or soused. A Dutch favorite is "maatjes", a pickled herring product.

3. Seafood consumption in Holland has risen by 31 percent since 1970. Tom Wray, "Exports increase despite supply fears," *Seafood International*, November 1991, p. 25.

4. Tom Wray, "Exports increase despite supply fears," *Seafood International*, November 1991, p. 25 and "The Netherlands: fish distribution and processing centre of Europe," *World Fishing*, June 1993, p. 5.

5. See: William B. Folsom, "The Netherlands Fisheries, 1985-1989," *International Fisheries Report,* IFR-90/75, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., October 26, 1990, BBH Corporation, "Exporting Seafood Products to Europe - Germany, the Benelux countries, and Spain," *Seafood Business Report,* 1986, and "The Netherlands: fish distribution and processing centre of Europe," *World Fishing*, June 1993, pp. 5-7.

6. For an earlier description of the Dutch fishing fleet see: William B. Folsom, "The Netherlands Fisheries, 1985-1989," *International Fisheries Report,* IFR-90/75, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., October 26, 1990.

7. Richard Lord, "Down to the sea with the Dutch," *Seafood Leader*, Spring 1988, p. 189.

8. "Dutch processor expresses flatfish fears," *Seafood International,* November 1991, p. 41.

9. Richard Lord, "Down to the sea with the Dutch," *Seafood Leader*, Spring 1988, p. 189.

10. Peter Hjul (Editor), *The Stern Trawler,* Fishing News (Books) Ltd, London, 1972, pp. 167-168.

11. Peter Kramer, "Holland's mighty trawlers," *Fishing News International,* September 1981, pp. 40-41 and "More new trawlers and carriers for Dutch fleet," *Fishing News International,* March 1982, p. 25.

12. Robert Ford, "The Dutch Mackerel Fishery," *International Fisheries Report*, IFR 84/34, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., May 4, 1984. The IFR reported that Dutch exports to Nigeria increased from 37,000 tons in 1978 to 109,000 tons in 1982.

13. The Netherlands identified the following high-seas vessels that would be authorized to fish off the coast of the United States in 1984: Alida, Annie Hillina, Ariadne, Arctic, Astrid, Atlantic, Boeier, Caribil, Celtic, Cornelis Vrolijk, Dirk Dirk, Eer Sluis, Hendrika Johanna, Holland, Johanna Maria, Joint Forest, North Pole, Prins Fernhard, and Zeeland.

14. "Danish plant freezes Dutch ship's fish," *Fishing News International*, April 1984, p. 11.

15. The name *Dirk Dirk* was later used in the construction of a large vessel in the Federal Republic of Germany by Dutch fishing interests.

16. Tom Wray, "Quality ships for quality catches," *Fishing News International*, June 1984, p. 31.

17. "Two Ministers' views: Holland - "We do not wish to see further growth of our cutter fleet," *World Fishing*, August 1984, p. 5.

18. Pieter Kramer, "Holland's latest supertrawlers," *Fishing News International*, January 1985, p. 27.

19. EC, Commission Decision of 24 April 1985 on the multiannual guidance program in respect of the fishing fleet submitted by the Netherlands pursuant to Council Regulation (EEC) No. 2908/83, *Official Journal of the European Communities*, No L 157/38, June 15, 1985.

20. Cor de Graaf, " The Dutch high-seas fishing fleet," *Marine International Fisheries Magazine*, 1986, pp. 15-16.

21. "Poland builds for Holland and Iceland," *Fishing News International,* August 1988, p. 55.

22. "Trawler takes: year to build!," *Fishing News International*, August 1988, p. 39.

23. *Fishing News International*, July 1989, p. 13.

24. "120 meter Dutch freezer," *Fishing News International*, May 1993, p.3.

25. "Pelagics frozen on-board," *Seafood News*, July 1993, p. 14.

26. The Dutch began fishing in 1988 (1,475 tons of mostly squid) and cotinued through 1990 (3,346 tons of mostly squid. See appendix 29 and 30 for details.

27. "Fleet curbs working - says Dutch ministry," *Fishing News International,* November 1989, p. 8.

28. "Pelagic freezer packs 3500 tons on pallets," *Fishing News International*, December 1990, pp. 32-33. The ship is similar to the West German pelagic freezer *Jan Maria*, operated by Doggerbank Seefischerie, which is wholly-owned by the same Dutch Parlevliet company, which owns the *Dirk Diederik* and the *Dirk Dirk*.

29. Parlevliet & Van der Plas operates 5 trawlers, 3 under the German flag and 2 under the Dutch flag. The 5 vessels reportedly catch or purchase (through klondyking) more than 100,000 tons of fish annually! Tom Wray, "Exports increase despite supply fears," *Seafood International*, November 1991, p. 26.

30. Apparently renamed after the vessel by that name launched in 1984. *Fishing News Internationa*l reported that the old *Zeeland* and the *Holland* was sold to Russia. "From Holland's YVC yard," *Fishing News International,* February 1990, p. 37.

31. "120 metre trawler ordered by Cornelis Vrolijk," *World Fishing,* June 1993, p. 12.

32. "Investment continues in Dutch fleet," *Eurofish Report*, August 19, 1981, p. FS/3.

33. "Dutch order three more big freezer trawlers," *Fishing News International*, March 1983, p. 29.

34. "OECD: Dutch increase amount of available shipbuilding subsidy," U.S. Embassy, The Hague, March 13, 1990.

35. See also: William B. Folsom, "The Netherlands Fisheries, 1985-1989," *International Fisheries Report,* IFR-90/75, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., October 26, 1990.

36. "Dutch build up fleet despite quota warning," *The Irish Skipper*, April 1980. Most of these vessels were small, wooden vessels used in coastal fisheries. EC fleet statistics confirm that the Dutch fishing fleet declined sharply between 1970 and 1979.

37. William B. Folsom, "The Netherlands Fisheries, 1985-1989," *International Fisheries Report,* IFR-90/75, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., October 26, 1990.

38. "Dutch owners fly in," *Fishing News International*, July 1992, p. 15.

39. Office of Naval Intelligence. U.S. Navy.

40. Office of Naval Intelligence, U.S. Navy.

2.9

PORTUGAL

Portugal's high-seas fishing fleet once included many modern, supertrawlers, but the fleet slowly fell into disrepair following the loss of Portugal's African colonies and the extension of 200-mile Exclusive Economic Zones (EEZs) by many countries in the mid-1970s. The high-seas fleet declined from 79 vessels in 1981 to 54 vessels in 1992. Portugal joined the EC in 1986 and this resulted in an infusion of EC funding to help modernize the fishing fleet. The Portuguese fishing fleet currently operates off Canada, the Svalbard Islands (off Norway), the Falkland Islands, Morocco, Mauritania, and Guinea (Bissau) under EC agreements. Portuguese fishing vessels fish off Spain and South Africa under special bilateral agreements with the Government of Spain and under the terms of a bilateral agreement with the Republic of South Africa. Distant-water fishing remains an important source of fish for Portugal's high-seas fleet and the Portuguese could shift their fleet quickly to take advantage of new opportunities. A few Portuguese high-seas vessels could begin fishing off Argentina or Namibia in the near future.

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1. General Background

Portugal has a long tradition of fishing. Portuguese fishermen first appeared off the coast of North America long before the arrival of the Pilgrims in 1620. Fishing, especially for the highly prized Atlantic cod, was long a mainstay of Portugal's fisheries. Local fisheries tend to focus on the harvesting of sardines, using many small purse seines. Many of Portugal's fishing vessels are small, wooden boats that operate out of small harbors. These brightly decorated vessels are attractive, but not very efficient. Nevertheless, Portuguese fishermen landed 325,000 tons of fish and shellfish in 1991[1] (see tables 2-3). The 1991 harvest included 193,500 tons caught in Portuguese waters and 131,500 tons (or 40 percent) taken in international waters (see table 3).[2] International waters account for between 30 and 40 percent of Portugal's total landings. Portugal's catch in international waters declined from a high of 160,000 tons in 1986 to a low of 85,000 tons in 1989, but has since increased, as vessels displaced from Namibia apparently shifted their operations into the Northwest Atlantic Fisheries Organization (NAFO) area off Canada.

2. Fleet Background

The coastal fleets contrasted with Portugal's fleet of modern high-seas vessels in the late 1960s and early 1970s. The extension of fishery jurisdiction by many countries to 200-miles and the loss of Portugal's former African possessions disrupted the growth of Portugal's fishing fleet and the fleet began to decline in both number and catch, while growing older. In 1986, Portugal joined the European Community and efforts to modernize Portugal's fisheries have begun to take effect. There is a great deal of activity associated with modernizing Portugal's fishing fleet. The Portuguese fishing fleet consisted of 16,251 vessels registering 186,523-GRT in 1990 and 14,866 vessels registering 183,306-GRT on December 31, 1991.[3]

Portugal's fishing fleet, the third largest in the EC is an aging fleet. In 1990, there were 16,000 registered vessels including 14,000 vessels that operated within 50 kilometers of the Portuguese coastline (mostly under 9 meters in length). The "coastal fleet" (Azores and Madera) consisted of 1,960 trawlers, purse seiners, and multi-purpose vessels measuring over 9 meters, with a GRT not exceeding 180-GRT, and powered by engines of over 25 kilowatts (kw).[4] The coastal fleet fishes for demersal and semi-pelagic species, such as hake, pouting, and horse mackerel. This fleet also fishes for shrimp and lobster. Purse seiners concentrate on fishing for sardines, which account for half of Portugal's trade in fishery products. Multi-purpose vessels fishing for scabbardfish, octopus, hake, red grouper, meagre, and seabass. The high-seas fleet consists of approximately 108 vessels[5] which traditionally operate in the North Atlantic (off Norway and Svalbard), the Central Eastern Atlantic (Morocco, Mauritania, and Guinea), and in the South Atlantic (from Angola to South Africa). In recent years, Portuguese high-seas vessels have begun operating in the Falkland's fishing grounds.[6] The catch peaked at 9,800 tons in 1988 (mostly hake) and declined to 1,500 tons in 1992. Only two Portuguese vessels, the *Murtosa* and the *Pardelhas*, are licensed to fish in the Falkland's EEZ in 1993.

One of the first high-seas trawlers built in Portugal was the *Santa Issuable* (2,056-GRT) which was launched by the Estaleiros Sao Jacinto of Aveiro for Empresa de Pesca de Aveiro Ltda. in 1965. The vessel was built as a saltfish and a freezer stern trawler for fishing off Labrador and Newfoundland, Canada.[7] The *Praia de Ericeira* (1,138-GRT), launched in 1967, was the first of five freezer trawlers built to operate on the Atlantic hake grounds off southern Africa.[8] The *Luis Ferreira de Carvalho* (2,389-GRT) was launched in 1969 as a freezer trawler designed to fish for cod in the northwest Atlantic.[9] All of these vessels established Portugal as a high-seas fishing nation able to build and operate vessels over 2,000-GRT. By 1976, there were 13 of these giant trawlers listed in Portugal's fleet. There followed a period when many nations extended their fisheries jurisdictions out to 200-miles. This coincided with Portugal's loss of its colonies in Africa and a major change in government that caused tremendous dislocations in the country. It was during this time that Portugal's high-seas fleet of 2,000-GRT vessels gradually declined; by 1992 there were only 2 vessels in that range in Portugal's fishing fleet. In 1982, the Portuguese tuna superseiner, the *Tunamar* (1,200-GRT) was launched by Campbell Industries of the United States.[10] The vessel was later reported using a helicopter to search for tuna while fishing off Cape Verde.[11] By 1983, there were 24 firms belonging to the Portuguese Long Distance Fleet Association (ADAPLA).[12] The year 1983 was gloomy for many reasons, but the loss of the lucrative cod fishing grounds off North America was one key reason. Many Portuguese fishermen were calling for the Government to allocate funds to scrap these old vessels or to modernize the fleet.[13] During the next two years the Portuguese began negotiations on entry into the EC and problems with access to Spanish waters became a major problem for both countries.[14] When Portugal joined the EC on January 1, 1986, the fleet was described as "colorful, but inefficient" and "unable to compete with the modern efficiency and competition of its new neighbors.[15] The EC announced that for the first 10 years of membership, the renovation of the Portuguese fishing fleet would receive priority.[16] The newest vessel in the Portuguese fishing fleet is the *Iris Do Mar*, built in the Sao Jacinto shipyards in Portugal. The vessel is 69 meters long (no tonnage figure available) and is built to fish for cod and other demersal species in the North Atlantic using Baader filleting equipment. The vessel will have an endurance of 22,000 miles and 150 fishing days. The vessel was built using EC grants and was expected to begin fishing in February 1992.[17]

3. Modernization Programs

The Portuguese Council of Ministers allocated $150 million to rebuild the Portuguese fishing fleet in 1983. The five year plan includes funding for the construction and outfitting of 370 vessels, including 150 vessels for the artisanal fleet, 34 trawlers for the industrial/pelagic fleet, 34 vessels for coastal fisheries, 20 tuna seiners, and 15 freezer trawlers. The plan also called for the modernization of 60 fishing vessels. The program was designed to increase the tonnage of the Portuguese fishing fleet from 292,000-GRT in 1981 to 496,000-GRT by 1987.[18] Despite this announcement, modernization of the Portuguese fleet lagged and many of the vessels were 10 to 15 years old when Portugal joined the EC on January 1, 1986. On July 4, 1986, the EC announced a program to modernize Portugal's aging fleet.[19] The purpose of the program was to restructure the fishing fleet by replacing obsolete vessels and modernizing vessels in service. The plan called for 70 vessels to be modernized and over $55 million in funds to be spent modernizing the fleet. The Multiannual Guidance Program (MAGP) for the Portuguese fleet called for continued modernization of the fleet including redeploying fishing activities in coastal areas.[20]

Funding for fleet modernization between 1986 and 1990 amounted to $165 million and was provided primarily by the EC and the Government of Portugal. Funding for upgrading the fishing fleet amounted $20 and $145 million was earmarked for the construction of 127 new vessels. Approximately $211 million were used for modernizing Portugal's aging port infrastructure and fish processing industry.[21]

4. Decommissioning Programs

The EC's Multiannual Guidance Program (MAGP) for the Portuguese fleet called for a slight reduction in the size of the fleet from 216,000-GRT in 1986 to 210,000-GRT by 1991, while the fleet was being modernized. Portuguese fishermen took advantage of EC decommissioning programs to decommission 45 vessels between 1987 and 1988.[22] The decommissioned vessels included the *Rio Lima* (1,329-GRT) which was sold to a third country in 1988, the *Capitão Ferreira* (735-GRT) which was scrapped, the *Nuno Filipe* (1,299-GRT), and the *Senhora do Mar* (1,161-GRT) which were both sold to third countries in 1988.[23] The Portuguese high-seas fleet declined from 74 vessels in 1986 to 54 vessels in 1992, a decrease of 20 vessels since Portugal joined the EC.

5. Shipyards

The *Mar de Hielo* (approximately 2,056-GRT) was built in Portuguese shipyards for delivery to a customer in Spain in 1966, thus establishing Portuguese shipyards as qualified to produce high-seas fishing vessels.[24] Portuguese shipyards still have the capacity to produce high-quality vessels, but appear to have lagged behind the Spanish in the development of new and innovative fishing vessels after the 1970s and into the 1980s. *Fishing News International* in July 1992 reported that the São Jacinto shipyards, which were working on the *Iris Do Mar,* a large stern trawler, was also busy attempting to work on a variety of new trawlers being built thanks to the availability of EC grants to Portuguese fishermen.[25]

6. International Agreements

Prior to accession to the European Community, Portugal negotiated agreements with the German Democratic Republic, Japan, Morocco, Mozambique, South Africa, Spain, and the Soviet Union. Portuguese fishermen also had historical fishing interests in Angola, Canada, Gambia, Guinea (Bissau), and Senegal. Upon entry into the EC, the responsibility for negotiating new or replacement agreements shifted to the Community.[26]

In accordance with the EC accession treaty, Portugal's third country agreements were guaranteed by the EC. In the case of a new country agreements, with whom the EC holds no fishing agreement, the EC agreed to negotiate agreements to ensure the traditional fishing activities of the member state are not disrupted.

Since accession to the EC in 1986, the only bilateral fishing agreement retained by Portugal is the fishing agreement with the Republic of South Africa signed in 1979. This treaty entered into effect in 1988 and provides Portugal with an annual fishing quota of 700 tons.[27]

A special 10-year "transitory regime" between Portugal and Spain was approved when Portugal and Spain joined the EC. According to this agreement, the following may operate within the Portuguese 12-mile limit:

- 21 Spanish trawlers; only 11 ships may fish at any given time. Species fished are mainly hake and mackerel The same rules apply to Portuguese vessels fishing in Spanish waters.

- "Palangreiero" ships: Permission for 75 vessels to operate north of Peniche, Portugal, and 15 vessels to fish south of the port of Peniche.

- Fishing for tuna is permitted by 70 Spanish vessels from May to July of each year.

Border agreements: Prior to joining the EC, Spain and Portugal both signed border agreements designed to control fishing in each other's waters. These agreements include the Minho border agreement (signed January 31, 1986) and the Guadiana border agreement (signed December 12, 1986). The Minho border agreement includes the following restrictions on fishing by Spanish vessels within 12-miles of the Portuguese coast:

- traditional fishing: 26 Spanish vessels

- "gamelas" fishing: unlimited number of vessels

- sardine fishing: 10 Spanish vessels

The Guadiana border agreement permits:

- net fishing: 7 Spanish vessels.

- razor clam trawling: 14 Spanish vessels.

- conch trawling: 10 Spanish vessels.

With regard to the agreement for the Guadiana river, fishing is allowed by 2 Spanish vessels and conch fishing by 10 vessels (see table 3 for catch statistics)

7. Fleet Dispersal Plans

Portugal is certain to return to the lucrative hake fishing grounds off Namibia if the European Community is able to negotiate an agreement with that country in the next 1-2 years. Namibian waters provided Portugal with a catch that reached 45,400 tons in 1987.[28] Portuguese vessels are certain to continue fishing in the NAFO area off Canada. Portuguese catches in the NAFO region went from 59,800 tons in 1989 to 75,300 tons in 1991 and included 13,357 tons of Atlantic cod.[29] Fishing off Spain, Morocco, Mauritania, and Guinea (Bissau) are likely to continue as well as off the Svalbard Islands off Norway. Portuguese vessels fished off the Falkland Islands between 1987 and 1992 and 2 Portuguese vessels were licensed to fish those waters in 1993. The Portuguese catch in the Falklands amounted to only 1,500 tons in 1992 (appendix 29-31).

The authors are not certain of any future plans to fish in any special waters, but it is possible that Portuguese vessels may wish to return to fishing off Senegal, Guinea (Conakry), Sierra Leone, and Cape Verde in the future; harvests in these areas were fairly small in recent years and it may not justify a return to these areas. The U.S. Embassy in Lisbon reports that EC Regulation (EC) 4828/86 and Regulation (EC) 3944/90 stimulated the creation of joint ventures during 1991 and 1992 and has resulted in a number of projects being submitted in 1993. This, the Embassy reports, has reopened access for a number of Portuguese fishing companies to fish in the EEZs of many African nations.[30]

The U.S. Embassy in Lisbon also noted that an EC-Russia fisheries agreement could open the Barents Sea to cod fishing by a number of EC vessels; Portugal would support an EC effort to negotiate a treaty with the Russians that would open the doors to cod resources.[31] The Embassy also notes that Portugal would welcome Norway's joining the EC, since access to Norwegian waters would likely be a requirement for EC membership; Norwegian waters have ample resources of cod and the Portuguese would certainly appreciate the opportunity to fish in those waters.[32] There is also some indication that the Portuguese are considering fishing opportunities along the coast of Chile and Peru.[33]

SOURCES

Datapescas difusão, Gabinete de Estudos e Planeamento das Pescas, Secretaria de Estado das Pescas, Lisboa, 1989.

Eurofish Report, various issues.

Fishing Gazette, various issues.

Fishing News International, various issues.

Hjul, Peter (Editor). The Stern Trawler, Fishing News (Books) Ltd., London, 1972, p. 217.

Industrias Pesqueras, various issues.

Official Jounral of the European Communities, various issues.

Programa de Orientaçao Plurianual para a Frota, 1992-1996, Lisbon, 1991.

Recursos da Pesca, Série Estatistica 1991, Volume 5, A-B, Gabinete de Estudos e Planeamento das Pescas, Lisboa, August 1992

Seafood Magazine, various issues.

U.S. Embassy, Lisbon, Portugal, various reports.

World Fishing, various issues.

Portugal

125 km
Braga
Porto
North
Atlantic
Ocean
Covilhã
Coimbra
Portalegre
LISBON
Beja
Faro
Azores and Madeira Islands are not shown

Table 1.--PORTUGAL. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	**Gross Registered Tons (GRT)**						**Total**	
	500-999		**1,000-1,999**		**Over 2,000**			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	11,702	16	57,434	44	26,653	12	95,789	72
1976	12,006	17	57,434	44	29,053	13	98,493	74
1977	12,103	17	61,974	47	29,035	13	103,112	77
1978	12,578	17	63,558	48	27,004	12	103,140	77
1979	14,086	19	63,558	48	27,004	12	104,648	79
1980	14,086	19	67,599	50	19,897	9	101,582	78
1981	13,989	19	70,484	52	17,735	8	102,208	79
1982	13,227	18	73,667	54	11,239	5	98,133	77
1983	13,274	18	75,654	55	8,834	4	97,762	77
1984	12,592	17	74,320	54	8,834	4	95,746	75
1985	12,592	17	73,134	53	8,834	4	94,560	74
1986	12,592	17	73,440	53	8,834	4	94,866	74
1987	14,824	20	72,137	52	4,764	2	91,725	74
1988	13,351	18	72,223	52	4,764	2	90,338	72
1989	12,584	17	69,733	50	4,764	2	87,081	69
1990	12,572	17	69,508	50	4,764	2	86,844	69
1991	12,826	17	59,912	43	4,764	2	77,502	62
1992	12,046	16	50,865	36	4,764	2	67,675	54

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, UK, various years.

Table 2.--PORTUGAL. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	208,943	193,971	196,705	195,201	209,193	202,455	196,132	186,523	183,306	200,000E
Total fishing fleet (Number of vessels)	6,834	7,209	7,112	7,001	7,000E	17,147	16,603	16,251	14,866	14,000E
High-seas fleet (Number of vessels)	77	75	74	74	74	72	69	69	62	54
High-seas fleet (GRT)	97,762	95,746	94,560	94,866	91,725	90,338	87,081	86,844	77,502	67,675
Catch (Metric Tons)	247,596	291,724	305,841	401,955	389,603	346,677	331,795	321,891	325,349	330,000
Fishermen (Number)	33,857	33,585	35,000E	35,000E	43,111	44,256	38,924	39,000E	39,000E	39,000E

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet).

Table 3.-- Portuguese fisheries catch, by fishing grounds, both domestic and international, 1986-91.

Fishing grounds	1986	1987	1988	1989	1990	1991
	Metric tons					
DOMESTIC:						
Portuguese	243,118	209,179	210,563	198,432	199,194	193,536
INTERNATIONAL:						
North Atlantic:						
Northeast Atlantic Fisheries Organization	98,135	82,134	40,269	49,760	67,333	75,317
Svalbard/Norway	5,096	3,692	2,469	2,479	1,695	973
South Atlantic:						
Angola	-	-	1,200	-	-	-
Namibia[a]	36,310	45,444	31,472	25,155	-	-
South Africa[b]	-	-	870	1,569	1,199	1,492
Falkland Islands	-	-	10,442	9,676	5,897	3,243
Eastern Central Atlantic and Mediterranean						
Spain[c]	-	2,448	3,266	2,916	3,285	3,984
Morocco:						
Joint venture operations[d]	13,195	9,335	9,959	8,031	7,200	5,801
EC fishery agreements	1,908	4,054	4,165	6,420	7,542	8,553
Mauritania	5,152	42	455	1,533	1,848	2,085
Senegal	-	-	90	41	-	-
Guinea (Conakry)	-	-	-	84	39	-
Guinea (Bissau)	-	-	1,563	1,803	2,654	2,214
Sierra Leone	-	-	980	813	-	-
Catch in international waters	159,796	147,149	107,200	110,280	98,692	103,662
TOTAL CATCH	402,914	356,328	317,763	308,712	297,886	297,198

Source: *Recursos da Pesca,* Série Estatística 1991, Volume 5, A-B, Gabinete de Estudos e Planeamento das Pescas, Lisboa, 1989-1991 and Datapescas difusão, Gabinete de Estudos e Planeamento das Pescas, Secretaria de Estado das Pescas, Lisboa, various years.

[a] Namibia declared independence on March 21, 1990 and ordered all foreign fishing vessels out of its waters shortly thereafter.

[b] Portugal was permitted to maintain its bilateral fisheries agreement with the Republic of South Africa after it joined the EC in 1986.

[c] Under a bilateral agreement with Spain which permitted vessels from both countries to fish in each others waters.

[d] The EC-Morocco fisheries agreement permitted Portuguese fishing firms to establish joint venture fishing companies with Moroccan fishermen as a special source of fish.

ENDNOTES

1. *Recursos da Pesca,* Série Estatistica 1991, Volume 5, A-B, Gabinete de Estudos e Planeamento das Pescas, Lisboa, August 1992, p.15.

2. This quantity, however, does not appear in their national catch statistics. *Recursos da Pesca,* Série Estatistica 1991, Volume 5, A-B, Gabinete de Estudos e Planeamento das Pescas, Lisboa, August 1992, p.161.

3. *Recursos da Pesca,* Série Estatistica 1991, Volume 5, A-B, Gabinete de Estudos e Planeamento das Pescas, Lisboa, August 1992, p.7.

4. A kilowatt is 1.34 horsepower.

5. This figure was provided by the U.S. Embassy in Lisbon and includes some vessels under 500-GRT. *Lloyd's Register* shows 54 high-seas vessels over 500-GRT as listed under Portugal.

6. This section was provided by "Portuguese response for world fishing fleet study," U.S. Embassy, Lisbon, July 27, 1993. For details on Portugal's catch in the Falkland's EEZ see appendix 29-31.

7. Peter Hjul, *The Stern Trawler,* Fishing News (Books) Ltd., London, 1972, p. 217.

8. *Op.Cit.*, p. 218.

9. *Op.Cit.*, p. 217.

10. "Tunamar 1 delivered to TUNAMAR S.R.L.," *Fishing Gazette,* March 1982, p. 54.

11. "Helicopteros para la pesca del atún," *Industrías Pesqueras,* December 15, 1982.

12. "List of Portuguese long distant fleet (ADAPLA) association members," U.S. Embassy, Lisbon, October 14, 1983.

13. "PORTUGAL: Access of isolation?" *World Fishing*, April 1985, p. 9.

14. "PORTUGAL: Access of isolation?" *World Fishing*, April 1985, p. 9.

15. "EEC membership problems for Portuguese fishing fleet," *Eurofish Report*, May 23, 1985.

16. "Portugal is going to enlarge its fish landings,"*Seafood Magazine*, September/October 1985, p. 9.

17. "Portugal," *Fishing News International,* July 1991.

18. "Pescar o dobro dentro de 6 años." Reprinted as a *Weekly Highlight* by the National Marine Fisheries Service, NOAA, U.S. Department of Commerce on November 12, 1982.

19. Commission Decision of 4 July 1986 on the guidance program for the fishing fleet submitted by Portugal for 1986 in accordance with Council Regulation (EEC) No 2908/83, *Official Journal of the European Communities*, No L 205/45, July 29, 1986.

20. Commission Decision of February 9, 1990 amending Decision 88/150/EEC on the multiannual guidance program for the fishing fleet (1987 to 1991) forwarded by Portugal pursuant to Regulation (EEC) No 4028/86, *Official Journal of the European Communities*, No. L 66/23, March 14, 1990.

21. "Portugal's response for world fishing fleet study," U.S. Embassy, Lisbon, July 27, 1993.

22. Vessels withdrawn according to Article 24 of Regulation (EEC) No 4028/85, *Official Journal of the European Communities*, No C 320/2, December 22, 1989.

23. Vessels withdrawn according to Article 24 of Regulation (EEC) No 4028/85, *Official Journal of the European Communities*, No C 320/2, December 22, 1989.

24. Peter Hjul, *The Stern Trawler,* Fishing News (Books) Ltd., London, 1972, p. 217.

25. "Portugal," *Fishing News International,* July 1991.

26. "Portugal's fleet and fishery," *World Fishing,* April 1986, p. 6.

27. "Portuguese response for world fishing fleet study," U.S. Embassy, Lisbon, July 27, 1993.

28. *Datapescas difusão*, Gabinete de Estudos e Planeamento das Pescas, Secretaria de Estado das Pescas, Lisboa, 1989.

29. Leonor Ramos, Porugal's Groundfish Sector, U.S. Embassy, Lisbon, Portugal, August 26, 1993, p. 2.

30. Nina M. Fite, Economic Officer, U.S. Embassy, Lisbon, Portugal, fax dated August 27, 1993.

31. Nina M. Fite, Economic Officer, U.S. Embassy, Lisbon, Portugal, fax dated August 27, 1993.

32. Nina M. Fite, Economic Officer, U.S. Embassy, Lisbon, Portugal, fax dated August 27, 1993.

33. *Programa de Orientaçao Plurianual para a Frota*, 1992-1996, Lisbon, Portugal, 1991, p. 32.

2.10

SPAIN

The Spanish 1992 high-seas fleet of 204 vessels (235,000-Gross Registered Tons, GRT) is the largest in Western Europe.[1] Many of these vessels were excluded from Namibia's lucrative hake fisheries when Namibia gained independence in 1990 and extended its Exclusive Economic Zone (EEZ) to 200-miles. Some Spanish vessels were shifted to fishing off the Falkland Islands, but most were left idling in their home port of Vigo, Spain. The EC agreement with Argentina will allow some of these vessels to shift to South American waters. Many, however, will remain unemployed. Most Spanish vessel owners hope that the EC will resume negotiations with Namibia and reach an agreement permitting Spanish vessels to begin fishing in these waters in the near future. Some Spanish vessel owners have grown increasingly desperate; one company reflagged its vessels as a Congolese ship and attempted to fish in Namibia's waters. The vessel was caught. It is likely that a number of Spanish vessels will be sold in the next few years, especially if the EC is unable to negotiate a fishing agreement with Namibia. Alternatively, there will be increasing pressure on the EC to negotiate additional fishing agreements in Latin America where Spanish fishermen have the advantage of a common language. The long-term outlook for more Spanish vessels to fish off South America is good. Spanish tuna seiners currently fish off the coast of West Africa and in the Indian Ocean. These modern tuna seiners could easily move into the Pacific Ocean if catches in traditional waters begin to decline. One Spanish purse seiner, the *Monteclaro*, sank in the Eastern Tropical Pacific on July 14, 1993 and several Spanish tuna vessels were reflagged in Panama in 1993. ***Spain remains Western Europe's single, largest potential source of vessel displacement***.

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1. General Background

Spain is the second largest fishing nation (after Denmark) in the European Community, with a 1992 catch of 1.4 million tons. Fisheries play a key role in the Spanish economy, accounting for 1% of total Gross Domestic Product.[2] This is more than that of any other European country. The Spanish have a love of seafood and the average Spaniard consumes 30 kilograms of seafood products annually.[3] Spain's access to the Atlantic and Mediterranean, has contributed to the growth of a large fishing industry and fleet.[4] Spain dominates the world hake and squid markets.[5] The Spanish have the largest distant-water fleet in Western Europe.[6] This fleet is capable of fishing anywhere in the world. Despite a massive fishing fleet, Spanish businessmen imported nearly 800,000 tons of fish and shellfish worth approximately $2.9 billion in 1992 versus exports of 270,000 tons worth $690 million. An overview of the Spanish fishing industry can be seen in tables 1-3.

2. Fleet Background

Spain was one of the pioneers in the development of distant-water fishing utilizing on-board freezing facilities. One of Spain's first distant-water ventures began in 1961[7] when Pescanova, S.A. sent a refrigerated side trawler, the *Andrade*, to fish for hake off southern Africa and another side trawler, the *Lemos*, to the Patagonian shelf off South America.[8] Pescanova next converted a former passenger ship, *Galicia*, into a factory mothership supplied by a fleet of 10 small stern trawlers off South America. The operation was not as successful as hoped, despite abundant supplies of hake. The company decided to build a vessel that could fish for hake in distant waters and process and freeze the catch for long periods of time. The first ship was the *Villalba* (1,604-GRT) built in 1963.[9] Other Spanish companies realized the effectiveness of building high-seas stern trawlers and the boom in construction began. In 1967, Spanish shipyards delivered the *Mar de Vigo* (2,938-GRT), one of the largest stern trawlers built in Europe at that time.

The Spanish fishing fleet of the 1990s consists of three sectors: inshore (*bajura*), offshore (*altura*), and high-seas (*gran altura*).[10] The high-seas fleet fishes off West Africa, Latin America, and New Zealand, as well as in the North Atlantic off Greenland and Newfoundland. These vessels harvest hake, squid, cod, and octopus.[11] Most of the high-seas fleet operates from Vigo, an Atlantic port in the province of Galicia in northwest Spain straddling the border with Portugal. The ships catching cod in the Grand Banks off Newfoundland typically use La Coruña, further up the coast toward the Bay of Biscay. The majority of Spain's processing plants and canneries are also located in Vigo.[12] The Spanish fleet is the largest in Western Europe, averaging 190 high-seas vessels over 500-GRT during the past decade.

The Spanish high-seas fleet in 1992 included 204 vessels (235,000-GRT).[13] Spain's fishing partners have long considered the fleet to be oversized.[14] This problem first surfaced in 1970 when massive building and intensive fishing resulted in lower catches in hake grounds. As a result, some trawlers were sold to Cuba and the Spanish Government ceased providing financial assistance for the construction of hake freezers.[15] The size of the Spanish fleet was a point of contention as Spain negotiated accession to the European Community in the early 1980's.[16] Other European nations feared the consequences of unfettered Spanish access to their fishing grounds. Fleet rationalization thus became a priority for both the Spanish government and the European Community. As early as 1981, a Spanish ministerial order prevented further expansion by Spanish vessels into EC waters.[17] The Spanish government also put in place a series of scrapping and conversion schemes in order to reduce the capacity of the Spanish fleet to Community norms under the first and second Multiannual Guidance Programs (MAGP).[18] With accession into the EC in 1986, the Spanish fleet became eligible for EC grants to support fleet reduction. Spain took full advantage of such programs, and by 1987 represented one third of the Community budget for fleet reduction.[19]

Not surprisingly, Spanish fishermen and vessel owners have complained about EC fleet reduction initiatives. They have argued that the EC's Common Fisheries Policy (CFP) responded to the needs of northern Europe, whose small fleets (with the exception of French tuna vessels) rarely fish beyond Community waters. Continuing the CFP as before despite the addition of the distant water capacity of the Spanish and Portuguese fleets would "condemn the Spanish fleet to extinction through a complete lack of interest or ability to find more imaginative formulas which would be beneficial to the Community as a whole."[20] Spain's lack of national cohesion has complicated Madrid's efforts to lead uniform national and external fishery policies. Both the Basque and Catalonian regional governments see themselves as representing distinct sociological nations, and as such resist any centralization of power in Madrid. The Basques are the most prolific fishers in Spain, and have strongly resisted efforts to restrict their fleets (or even to impose quotas on them). Basque fishermen are quick to take the law into their own hands, having gone so far as to deny Spanish and Community jurisdiction over fisheries by negotiating their own bilateral fishing accords with the Azores[21] and a number of African states.[22]

3. Modernization Programs

As of 1985, the majority of Spanish vessels were over twenty years old.[23] During the 1980's, the Government of Spain instituted a series of programs to encourage the replacement of old vessels. The Credito Social Pesquero (CSP) granted lines of credit to the builders of new fishing vessels until 1985, when Madrid's Industrial Credit Bank assumed responsibility for CSP programs.[24] CSP credits covered 30 percent of the cost of new vessels. Uncertainty over the availability to fish stocks, especially in third party waters, has forced the European Commission to insist that fleet renewal programs not allow the capacity of the fleet to expand, to the degree that new vessels would be constructed only if they replaced individual vessels of greater or equal tonnage.[25] In 1987, Madrid signed agreements with the "autonomous communities" of Galicia, Catalonia, Valencia and the Basque provinces, providing for the joint financing of modernization subsidies aimed particularly at the artisanal fleet, largely overlooked by EC-sponsored initiatives.[26] The 1987-91 MAGP mandated the renewal of 25% of the Spanish fleet, at a cost of $1.8 billion over five years.[27] As part of the overall approach to fleet modernization, the Spanish government (aided by the EC) has also offered grants and subsidies to cover 35% of the cost of upgrading the infrastructure of 150 Spanish ports.[28]

The U.S. Embassy in Madrid reports that Spain received EC funding for 216 vessel modernization projects in 1991.[29] EC support totaled $10.5 million and represented 18-percent of the total cost of the projects. The Government of Spain contributed $3.8 million to these projects. The Spanish Government also supported 68 modernization projects, contributing 14 percent of the $12.9 million in total costs.[30]

In July, 1993, the Fisheries Department of the Province of Galicia announced a $1.4 billion plan to scrap the region's entire fleet of 8,000 aging vessels in favor of 3,000 new and larger vessels.[31] The plan is a combination of modernization and restructuring of the fleet. The current regional tonnage of 166,000-GRT will fall to 139,000-GRT as many old vessels are scapped. The province intends particularly to reduce the number of inland vessels, and to seek EC and Spanish state funding. The Province hopes to reduce the overall size of the Galician fleet and to increase the average size of the remaining vessels for reasons of safety and economy.[32]

4. Decommissioning Programs

The Spanish Government has also offered grants to owners of vessels willing to remove them from the fishing industry. The most recent program has come within the framework of the 1992-96 MAGP, which requires Spain to remove 52,000 GRT from its fleet. Spain will offer $418 million to participating vessels with 60% of the funding coming from Brussels.[33] The MAGP targets the artisanal and South Atlantic fleets in particular for reduction. Direct Spanish Government assistance for decommissioning of Spanish vessels under the MAGP totaled $43.1 million in 1991.[34]

5. Shipyards

Spanish shipyards have an excellent worldwide reputation for the construction of fishing vessels, and fill numerous orders for both domestic and foreign owners. Spanish shipyards concentrate around Vigo, the primary Spanish fishing port. Vigo yards include Barreras, Santo Domingo and Freire. Spanish shipyards began producing high quality stern trawlers for foreign fishermen in the early 1970s.

Spanish shipyards underwent a construction "boom" in 1986-88. Production of new ships inceased as follows:[35]

1986: 18 vessels (14,000-GRT). Average size: 777-GRT.

1987: 50 vessels (31,189-GRT). Average size: 624-GRT.

1988: 125 vessels (30,248-GRT). Average size: 242-GRT.

1989-90: Not available.

1991: 52 vessels (49,637-GRT).[36] Average 955-GRT.

The reasons for the rapid growth in vessels has been explained as follows:[37]

- General prosperity of Spain during those years,

- opportunities in the Falklands,

- opportunities off Namibia, and,

- a new law in Spain favoring construction of new vessels.

It might also be added that new EC funding also favored the construction of new vessels during those years. The result was significant growth in the size of the high-seas fleet (Table 1).

This process has continued through the 1990s, but at more modest levels. In 1991 the Pasajes-based Guria yard built the *Txori Berri* (81 meters) to fish for tuna in the Indian and Pacific Oceans.[38] In 1992 the Russian Federation placed an order for twenty tuna freezer vessels with the Astilleros de Heulva worth $200 million.[39] Among the vessels built was the *Rodios*, a 69 meter, 1,520-GRT vessel.[40] Naval Guijon also received an order for 15 factory trawlers which will join the Russian Far East fleet.[41] In 1993, the shipyards of Factorias Vulcano and Naval Gijon were busy completing construction on two 105-meter factory stern trawlers for delivery to Russian owners. The *Vladimir Starzhinsky* and *Gijon* were ready for delivery in June 1993. The *Mikhail Drozdov* is scheduled for delivery in August 1993 along with the *Kapitan Nazin*. Two more ships will be delivered to Russian fishermen in January 1994 and two final ships in June 1994. This was part of a 15-ship construction program for Russian buyers at Spanish shipyards.[42] The Russian order was worth $540 million and reportedly is the world's biggest fishing vessel contract.[43]

6. International Agreements

Before accession to the European Community, Spain maintained numerous bilateral agreements with the EC itself (signed in April, 1980),[44] the United States, Canada, and a host of African countries. In 1986, the EC assumed responsibility for these agreements, although a Spain-South Africa agreement remained in effect as of 1991.[45]

The EC agreement with Morocco allows Spain access to its single most important fishing ground. The agreement provides access for 600 Spanish vessels (mostly in the 100-GRT range) to fish on a daily basis. These are smaller vessels that deliver fresh fish to markets in Spain on a daily basis; fresh fish and shellfish command premium prices in Spain. The EC agreement with Morocco was renewed on May 13, 1992. The new accord imposed a two-month annual fishing ban on coastal and high-seas fisheries. The number of vessels permitted to fish in Moroccan waters was limited to only 600 vessels, including 143 high-seas vessels for Spanish fishing. There is also a quota for 28 licenses for tuna vessels.[46] The importance of Morocco to Spain's fisheries can be seen in the price tag paid by the EC for access: $341 million per year. The EC-Morocco agreement and the agreement with Mauritania allows Spanish fleets operating from Las Palmas in the Canary Islands to fish for a variety of fish and cephalopodes; most of the catch is frozen and shipped to the mainland or exported to markets in the Orient. Spanish fishermen take advantage of the EC's agreement with various West African countries to fish for shrimp, finfish and tuna. Spanish vessels also fish for tuna in the Indian Ocean thanks to EC agreements in that area. Spanish vessels began fishing in the prolific squid fishery off the Falkland Islands following the conflict between the United Kingdom and Argentina over these remote islands. The Spanish catch off the Falkland was minor until 1986 when it nearly reached 60,000 tons. Since then, Spanish fishermen have caught between 65,000 tons and 85,000 tons annually under license.[47] The Spanish catch, which consists mostly of squid, hakes, and blue whiting, reached 88,000 tons in 1992 (see appendix 29-30 for details on the Spanish catch in the Falkland's EEZ). Thirty-four Spanish fishing companies received licenses to fish off the Falkland Islands in 1993 (table 5).[48]

The Spanish fishing fleet suffered some setbacks when many nations established 200-mile EEZs. The Spanish fishing fleet was slowly replaced from waters off New England as U.S. fishermen gained experience in catching squid once caught by Spanish vessels.[49] Charges of overfishing cod stocks in waters off Canada led to diplomatic confrontations between the EC and Canada and ultimately to a reduction in cod quotas for EC vessels fishing in the Northeast Atlantic Fisheries Organization (NAFO) area.[50] The reduction of cod quotas in the NAFO area was strongly resisted by Spanish fishermen until the stock nearly collapsed.[51]

The Spanish fleet faced its most serious setback when Namibia declared independence in March 1991 and ordered all foreign vessels out of its newly declared 200-mile EEZ.[52] The announcement impacted 202 Spanish vessels fishing off Namibia.[53] Unfortunately, some Spanish vessel owners continued to fish illegally in Namibian waters. This generated strong resentment in the newly independent state and led to several Spanish vessels being seized for illegal fishing. Severe fines were imposed and several vessels and their catches were confiscated. Pending negotiations with the EC broke off in the face of continued illegal fishing. Many of these 202 vessels returned to Vigo where they have been tied up for several years. A few vessels were able to switch to fishing grounds off Canada or the Falkland Islands. The situation for most of these vessels, however, has grown increasingly desperate. The loss of these important fishing grounds might help explain the reversal in the steady growth of the Spanish high-seas fleet through 1991 and the decommissioning of 15 ships in 1992.

7. Fleet Dispersal Plans

Returning many of Spain's fleet of idle trawlers to fishing off Namibia is a primary goal of most Spanish fleet owners. If they fail to accomplish this goal in the next 1-2 years, it is possible that most of these vessels will have to be sold. Spanish fleet owners are also concerned with fighting off reductions mandated in the MAGP. Again, if Spanish fleet owners are unable to regain access to Namibian waters, they will have no alternative, except to comply with EC fleet reduction directives...or possibly to seek alternative approaches to fishing, including the possibility of reflagging their vessels. Eighteen Spanish vessels were reflagged in Panama in 1993 (table 4).

Spanish fleet owners have begun preparation for moving some of their idled fleet into waters of Argentina as part of the newly negotiated agreement with that country. This will allow a significant number of vessels to shift into new grounds, but will continue to leave many vessels idle. The Spaniards hope that some of those remaining vessels will be allowed to resume fishing off Namibia and that the oldest vessels can be decommissioned in compliance with EC directives.

The Spanish tuna fleet is also very modern and successfully fishing for tuna off West Africa and in the Indian Ocean. This fleet, much like the French tuna fleet, might seek opportunities in the Pacific Ocean if catch levels begin to decline in their current fishing grounds. The Spanish, unlike the French, will have to wait for the EC to forge new fishery agreements since they do not have any EC-sanctioned ties in the Pacific region. Those unwilling to wait can reflag their vessels. One Spanish tuna vessel, the *Isabel Tuna,* was reflagged in Cyprus in 1990 and has been fishing in the Eastern Tropical Pacific for the past few years. The Spanish have either sold or reflagged at least 5 tuna vessels in Panama (table 4). It should also be noted that a Spanish-flag purse seiner, the *Monteclaro* (879-GRT), sank in waters in the Eastern tropical Pacific on July 14, 1993.[54] This suggests that Spain may already be investigating, if not actively fishing, tuna in the Pacific.[55]

One important distinction sets Spanish fishermen apart from many other European fishermen: they are actively fishing throughout the world and have years of experience fishing in distant-waters throughout the world (table 3). While other nations may have large fleets of modern vessels, many of their fishermen have remained close to home. The Spanish, by contrast, appear willing to fish from waters off the Antarctic to the Arctic. Spanish fishermen represent the single largest group in Europe that is able to fish anywhere in the world.

A vital, and as yet unanswered question, is whether the EC will be able to negotiate access to Namibia and Argentina -- and possibly other Latin American countries. If the EC fails to do so, it is possible that some Spanish vessel owners could decommission their vessels from EC rolls and reflag their vessels in other countries.[56] This could pose a very serious problem for fishery administrators around the world.

SOURCES

Arbex, *Juan Carlos. Pescadores Españoles, I,* Secretaria General de Pesca Maritima, Ministerio de Agricultura, Pesca, y Alimentacion, Marid, 1990

"Canada works to save decimated Atlantic fisheries," *The Christian Science Monitor,* July 15, 1993

Eidel'man, D.Ya., "Mirovoe Rybopromyslovoe Sudostroenie v 1991 godu," *Rybnoe Khoziastvo*, N.2, 1993, pp. 17-18 and reprinted as "World Construction of Fishing Vessels in 1991," translated by the Office of International Affairs, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, June 1993.

Eurofish Reports, various issues.

"Euzkadi: Ecoutez la différence," *France-Pêche*, November-December 1990, p. 31.

Fishing News International, various reports.

Hinton, Michael. "Estimated Catch and Fleet Information for the Eastern Pacific Ocean Tuna Fleet," *Inter-American Tropical Tuna Commission*, Report No. 93-23, January 1-July 19, 1993.

Hjul, *Peter (Editor). The Stern Trawler*, Fishing News (Books) Ltd., London, 1972

Industrias Pesqueras, various issues.

La Agricultura, La Pesca y la Alimentacion Españolas en 1991, Ministerio de Agricultura, Pesca y Alimentacion, Secretaria General Tecnica, Madrid, 1992.

La Pêche Maritime, various issues.

Leigh, Michael. *European Integration and the Common Fisheries Policy*, London: Croon Helm, 1983

Lord, Richard, "The Spanish Seafood Industry," *Seafood Business*, July-August 1991

Office of Naval Intelligence, U.S. Navy.

Official Journal of the European Communities, various issues.

"Pescadores or Pirates? The EC's High Seas Cowboys," *Seafood Leader*, July/August 1992

U.S. Consulate General, Barcelona, Spain, various reports.

U.S. Consulate General, Casblanca, Morocco, report dated July 1, 1993.

U.S. Embassy, Madrid, Spain, various reports.

World Fishing, various reports.

Spain

300 km
Bay of Biscay
La Coruña
Bilbao
León
Zaragoza
Barcelona
Valladolid
Salamanca
Balearic Sea
MADRID
Valencia
Balearic Islands
Córdoba
Alicante
Sevilla
Málaga
Mediterranean Sea
North Atlantic
Strait of Gibraltar

Table 1.--SPAIN. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	**Gross Registered Tons (GRT)**						**Total**	
	500-999		**1,000-1,999**		**Over 2,000**			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	65,083	93	94,313	69	25,051	10	184,447	172
1976	69,324	98	106,441	78	27,707	11	203,472	187
1977	68,300	97	107,094	78	29,768	12	205,162	187
1978	69,657	99	111,843	82	24,832	10	206,332	191
1979	66,911	96	105,000	77	15,087	6	186,998	179
1980	61,478	87	98,555	73	15,087	6	175,120	166
1981	58,304	83	94,258	69	12,372	5	164,934	157
1982	50,136	70	93,982	69	12,372	5	156,490	144
1983	49,704	69	91,892	67	12,372	5	153,968	141
1984	52,945	74	88,369	64	9,657	4	150,971	142
1985	53,387	75	86,967	62	14,310	6	154,664	143
1986	54,871	78	86,792	62	11,982	5	153,645	145
1987	64,116	90	99,944	72	14,841	6	178,901	168
1988	69,488	96	117,736	85	16,968	7	204,192	188
1989	71,300	98	141,361	102	25,509	11	238,170	211
1990	71,436	100	145,656	105	25,650	11	242,742	216
1991	76,708	109	133,073	96	32,097	14	241,878	219
1992	70,232	99	119,706	86	44,693	19	234,631	204[a]

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[a] The U.S. Embassy in Madrid, reported 173 vessels (628,041-GRT) registering more than 500-GRT in the Spanish fleet in 1992 as compared with 204 vessels (234,631-GRT) reported by *Lloyd's Register of Shipping Statistical Tables*. The authors are unable to explain the difference in the two sources. "World Fishing Fleet: Spain," U.S. Embassy, Madrid, August 5, 1993.

Table 2.--SPAIN. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	698,973	692,399	671,804	649,457	692,221	647,731	635,479	625,000E	671,850	628,041
Total fishing fleet (Number of vessels)	17,740	17,801	17,665	17,454	15,000E	14,258	13,747	12,000E	19,877	20,244
High-seas fleet (Number of vessels)	141	142	143	145	168	188	211	216	219	204
High-seas fleet (GRT)	153,968	150,971	154,664	153,645	178,901	204,192	238,170	242,742	241,878	234,631
Catch (Metric Tons)	1,412,764	1,440,606	1,482,843	1,488,528	1,524,900	1,592,658	1,559,800	1,458,134	1,350,000E	1,350,000E
Fishermen (Number)	100,000E	102,156	90,000E	94,246	90,000E	94,387	89,074	90,000E	87,581	85,158

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet).

Table 3.--SPAIN. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	14.2	33.0	26.2	27.2	28.7	29.6	30.7	29.1	29.2
Coastal[b] (Northeastern Atlantic and Baltic Sea, FAO area 27)	652.0	462.0	627.1	607.3	627.0	627.1	569.4	591.5	568.8
Distant-water:									
North Eastern Atlantic, FAO area 21	122.0	40.0	66.2	83.8	83.2	63.7	63.5	28.9	36.3
Western Central Atlantic, FAO area 31	0.0	0.0	1.5	0.0	0.0	0.0	2.4	1.8	1.6
Eastern Atlantic, FAO area 34	387.3	453.0	383.4	322.9	333.0	365.9	356.7	338.3	338.6
Mediterranean & Black Sea FAO area 37.	139.4	150.0	140.3	143.3	135.7	128.2	141.3	141.9	126.7
SouthWestern Atlantic FAO area 41	0.0	0.0	9.2	58.5	61.1	84.5	82.7	68.8	60.6
South Eastern Atlantic, FAO area 47.	197.2	128.0	188.1	199.5	195.6	192.6	195.7	142.3	93.1
Atlantic-Antarctic, FAO area 48.	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Western Indian Ocean, FAO area 51.	3.5	0.0	40.9	46.0	60.2	101.3	117.4	107.4	95.1
Sub-toal	849.4	771.0	829.6	854.0	869.3	936.2	959.7	829.4	752.0
Total	1,515.6	1,266.0	1,482.9	1,488.5	1,525.0	1,592.9	1,559.8	1,450.0	1,350.0

Source: FAO, *Yearbook of Fishery Statistics*, various years.

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[b] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

Table 4.--SPAIN. Spanish vessels reflagged in Panama, 1993.

Vessel name	Tonnage	Year built	Type of vessel
	Gross Registered Tons		
Acuario Dos	436	1959	NA
Acuario Uno	436	1959	NA
Adarra	232	1962	NA
Al-Nassim	937	1991	NA
Al-Shafq	937	1992	NA
Albacora Caribe	2,058	1990	Trawler
Albacora Diez	1,281	1977	Tuna vessel
Albacora Nueve	1,281	1976	Tuna vessel
Albacora Seis	1,836	1976	Tuna vessel
Alicante	270	1950	Trawler, nes
Alnajma Albaidha	937	1992	Trawler, nes
Arcay	541	1974	Trawler
Arcay Dos	1,293	1965	Refrigerated trawler
Cascabel	199	1967	Trawler, nes
Dushinka	612	1965	Refrigerated trawler
Mar Caribe 2	2,396	1969	Factory trawler
Mariano Otero	1,213	1983	Tuna vessel
Txori Aundi	2,030	1984	Tuna vessel

Source: Office of Naval Intelligence, U.S. Navy.

Table 5.--SPAIN. Spanish fishing vessels licensed to fish in the Falkland Islands, 1993.

Vessel name	Tonnage
	Gross Registered Tons
Arneles	1,344
Arpon	856
Beatriz Nores	1,024
Chicha Touza	644
Codeside	529
Conbaroya Tercero	554
Eguzki	1,665
Esperanza Meduina	1,866
Farpesca Cuarto	789
Ferralemes	1,072
Fiasco	865
Fragana	554
Hermanos Touza	1,140
Heroya Primero	1,612
Isla Alegranza	655
Isla Montana Clara	633
Jugamar	1,127
La Penuca	1,272
Loitador	1,267
Nuevo Alcocero	2,849
Patricia Nores	1070
Pescapuerta Cuarto	1,627
Pescavigo Dos	1,632
Pescavigo Uno	2,511
Playa de Galicia	1,021
Playa de Mogor	750
Playa de Pesmar	688
Principado de Asturias	1,527
Puente Ladeira	868
Puente Pereiras	1,093
Sil	2156
Tasarte	475
Telleiro	2074
Teucro	760

Source: Falkland Islands.

ENDNOTES

1. Spanish statistics listed 300 high-seas vessels in 1991 as compared to 219 vessels listed by *Lloyd's Register of Shipping Statistical Tables* for vessels over 500-GRT. Spanish statistics include vessels in the 100- to 499-GRT range. This is another example of the problem associated with using 500-GRT as a baseline for identifying high-seas vessels.

2. "Une flotte de quelque 13,000 bateaux," *La Pêche Maritime*, January 1991, p. 41.

3. Lord, Richard, "The Spanish Seafood Industry," *Seafood Business*, July-August 1991, p. 63., "World Fishing Fleet: Spain," U.S. Embassy, Madrid, August 5, 1993, and *La Agricultura, La Pesca y la Alimentacion Españolas en 1991*, Ministerio de Agricultura, Pesca y Alimentacion, Secretaria General Tecnica, Madrid, 1992.

4. "World Fishing Fleet: Spain," U.S. Embassy, Madrid, August 5, 1993 reported the total fleet at 20,244 vessels of 628,041-GRT in 1992. The Embassy noted that there were 85,156 fishermen enrolled in Spain in 1992.

5. Lord, Richard, "The Spanish Seafood Industry," *Seafood Business*, July-August 1991, p. 63.

6. *Lloyd's Register of Shipping* identifies 204 vessels (234,631-GRT) over 500-GRT in the Spanish fleet. The U.S. Embassy in Madrid, reported 173 vessels (628,041-GRT) over 500-GRT in the Spanish fleet in 1992. The authors are unable to explain the difference in the two sources. "World Fishing Fleet: Spain," U.S. Embassy, Madrid, August 5, 1993.

7. Spanish fishermen began fishing off the coast of Newfoundland beginning in 1540 and have a long history of fishing in distant waters. Juan Carlos Arbex, *Pescadores Españoles, I,* Secretaria General de Pesca Maritima, Ministerio de Agricultura, Pesca, y Alimentacion, Marid, 1990, p. 33.

8. Peter Hjul, *The Stern Trawler*, Fishing News (Books) Ltd., London, 1972, p. 183 and Juan Carlos Arbex, *Pescadores Españoles, I,* Secretaria General de Pesca Maritima, Ministerio de Agricultura, Pesca, y Alimentacion, Marid, 1990, p. 237.

9. Peter Hjul, *The Stern Trawler*, Fishing News (Books) Ltd., London, 1972, p. 183.

10. Lord, Richard, "The Spanish Seafood Industry," *Seafood Business*, July-August 1991, p. 63.

11. Lord, Richard, "The Spanish Seafood Industry," *Seafood Business*, July-August 1991, p. 64.

12. Lord, Richard, "The Spanish Seafood Industry," *Seafood Business*, July-August 1991, p. 63.

13. Spanish statistics report 302 high-seas vessels licensed to fish in distant waters in 1991.

14. "We are the market," *Fishing News*, July 20, 1984, p. 8. Spain's EC partners refer to the Spanish fleet as "The New Armada."

15. Peter Hjul, *The Stern Trawler*, Fishing News (Books) Ltd., London, 1972, pp. 183-184.

16. Leigh, Michael. *European Integration and the Common Fisheries Policy*, London: Croon Helm, 1983, p. 176.

17. Leigh, Michael. *European Integration and the Common Fisheries Policy*, London: Croon Helm, 1983, p. 177.

18. For example, the second MAGP called on Spain to reduce its fleet from 631,838-GRT in January 1987 to 604,750-GRT in December, 1991. A total of 58,852 tons of the reductions were to come from vessels fishing in third country waters. *Official Journal of the European Communities*, August 30, 1991, p. L241/47.

19. *Eurofish Report*, June 23, 1988, p. FS/2.

20. "What Is Happening to the Spanish Fishing Industry?" *Industrias Pesqueras*, January 1, 1990.

21. "Euzkadi: Ecoutez la différence," *France-Pêche*, November-December 1990, p. 31.

22. "Pescadores or Pirates? The EC's High Seas Cowboys," *Seafood Leader*, July/August 1992, p. 90.

23. "Modernisation of Fleet Goes Ahead," *Eurofish Report*, May 22 1985.

24. "Spain Planning 76 New Fishing Vessels This Year," *Eurofish Report*, October 24, 1985.

25. "Spanish 1986 Guidance Program Approved by Commission," *Eurofish Report*, October 2, 1986.

26. "Renovarse o morir," *Industrias Pesqueras*, October 15, 1987, p. 3.

27. "El 25% de la flota pesquera será renovada antes de 1992," *Industrias Pesqueras*, August 15, 1988, p. 24.

28. "Big Grants for Ports and Boats," *Fishing News International*, January 1990, p. 21.

29. "World Fishing Fleet: Spain," U.S. Embassy, Madrid, August 5, 1993.

30. "World Fishing Fleet: Spain," U.S. Embassy, Madrid, August 5, 1993.

31. "Galicia: Rebuild entire fleet," *Fishing News International*, Supplement on Galicia, Spain, July 1993, p. 1.

32. "Rebuild Entire Fleet--Says Plan for Spanish Region's Future," *Fishing News International*, July 1993, Supplement on Galicia, Spain, p. 1.

33. "España propone la reducción de 52.000 TRB en los próximos cinco años," *Industrias Pesqueras*, June 15, 1991, p. 7.

34. "World Fishing Fleet: Spain," U.S. Embassy, Madrid, August 5, 1993.

35. "Crise de la flotte: historique," *La Pêche Maritime*, June-July 1993, pp. 319-320. The article quoted from *Industrias Pesqueras*.

36. Eidel'man, D.Ya., "Mirovoe Rybopromyslovoe Sudostroenie v 1991 godu," *Rybnoe Khoziastvo*, N.2, 1993, pp. 17-18 and reprinted as "World Construction of Fishing Vessels in 1991," translated by the Office of International Affairs, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, June 1993. The article provides no information about the different vessels launched.

37. "Crise de la flotte: historique," *La Pêche Maritime*, June-July 1993, pp. 319-320. The article quoted from *Industrias Pesqueras*.

38. "Atlantic Start for Tuna Ship," *Fishing News International*, November 1991, p. 46.

39. "Russian Order Revives Spanish Shipyard," *Eurofish Report*, May 21, 1992, p. FS/5.

40. "Astilleros de Huelva in Midst of Russian Order," *World Fishing*, April 1993, p. 25.

41. "Naval Guijon Ahead of Schedule With Russian Factory Trawlers," *World Fishing*, April 1993, p. 26.

42. "Latest Russian giant leaving Spain," *Fishing News International*, May 1993, p. 8.

43. "Six ships still to build - in world's biggest fishing vessel contract," *Fishing News International,* August 1993, pp.22-23.

44. Leigh, Michael. *European Integration and the Common Fisheries Policy*, London: Croon Helm, 1983, p. 168.

45. Organization for Economic Cooperation and Development, *Draft Review of Fisheries 1991 (Spain)*, Document AGR/FI(92)8/PART10, p. 7.

46. "World fishing fleet study," U.S. Consulate General, Casablanca, Morocco, July 1, 1993.

47. Enrique López Veiga (interview), "Ni Falklands ni Malvinas: caladeros del Atlantico sur," *Industrias Pesqueras,* March 15, 1987, pp. 15-18.

48. "Late Falklands license rush," *Fishing News International*, June 1993, p. 41.

49. Spanish fishermen noted that their catch of squid went from 9,000 tons in 1977 to nothing by 1980. Miguel Maiza Esnaola, "Equilibrio y Desequilibiro I," *Industrias Pesqueras,* March 15, 1983, p. 12.

50. The Spanish fisheries magazine, *Industrias Pesqueras*, noted that Spanish cod fishermen harvested 241,200 tons in Canadian waters in 1966 and that the catch dropped to 25,960 tons in 1980 and has since nearly disappeared. Miguel Maiza Esnaola, "Equilibrio y Desequilibiro I," *Industrias Pesqueras,* March 15, 1983, p. 12.

51. Canadian Minister of Fisheries and Oceans, Ross Reid, launched a "last-ditch" effort to save what little remains of Canada's once-rich Atlantic cod fishery at the United Nations in July 1993. He noted that cod stocks have declined from 40,000 tons in 1988 to about 6,000 tons at present. Canada fears that only a tiny fragment remains of what was once a vast concentration of hundreds of millions of fish. Canadians fear that this small concentration could easily be overfished by large fleets of foreign fishing vessels just outside of Canada's 200-mile EEZ. "Canada works to save decimated Atlantic fisheries," *The Christian Science Monitor,* July 15, 1993, p. 9.

52. The Spanish catch off Namibia went from a TAC of 135,000 tons in 1978 to 55,845 tons in 1981. This, however, was ended when Namibia declared independence in 1990 and ordered all vessels out of its waters. Miguel Maiza Esnaola, "Equilibrio y Desequilibiro I," *Industrias Pesqueras,* March 15, 1983, p. 12.

53. The Spanish fleet included 155 vessels of the National Association of Hake Freezer Trawler Owners (ANAMER) based out of Vigo, Spain. There were also 40 ships operating with a Spanish association identified as ASPE and 7 with ANAC for a total of 202 Spanish ships. *Eurofish Report,* April 26, 1990, p. FS/1 and *Fishing News International, 1990.*

54. Michael Hinton, "Estimated Catch and Fleet Information for the Eastern Pacific Ocean Tuna Fleet," *Inter-American Tropical Tuna Commission*, Report No. 93-23, January 1-July 19, 1993.

55. The authors realize that some of the 18 vessels could have been sold to Panamanian fishermen in a legal, aboveboard manner. It is also possible that Spanish fishermen have established joint venture operations with Panamanian fishing interests. However, it is also possible that some of these vessels have been reflagged. Reflagging could be done to avoid Spanish taxes, safety regulations, or other restrictions. Reflagging could also be undertaken to allow Spanish fishermen to harvest species that are tightly controlled in Europe. These vessels could operate out of Spanish ports or they could operate far from Panama, seeking only a legal presence on Panamanian registries.

56. The idea is not as farfetched as it may appear. A Spanish firm, identified as Interburgo, S.A., has licensed a ship identified as *Sekishu* (the name could be Japanese or Chinese), 991.37-GRT, in Honduras under registration number L-1921792. The authors have no additional information about this vessel, but a 991-GRT represents a fairly large vessel. In addition, there is a vessel identified as *La Paloma* (4,358-GRT) registered in Honduras; the Government of Honduras, however, does not have any information about the owner of this vessel or the original flag state of the vessel. It is possible that the *La Paloma* (the name means "dove" in Spanish) could be of Spanish origin. A 4,358-GRT vessel is a large vessel.

2.11

UNITED KINGDOM

The United Kingdom's (UK) fishing fleet of high-seas vessels ranked among the largest and most modern in the world less than two decades ago. The loss of the UK's traditional fishing grounds off Iceland during the "Cod Wars" of the 1970s, however, signaled the end of British dominance in high-seas fishing, the UK high-seas fleet declined to only 18 vessels in 1986. The fleet has since enjoyed a modest resurgence, more than doubling to 41 vessels. This was partially the result of the Falkland's War, which opened up the island's huge squid resources to UK fishermen and partially as a result of EC grants to modernize the fishing fleet. The UK fleet fishes primarily in the North Atlantic. If the UK fleet continues to expand, some vessels may begin to fish in other distant-water fisheries, because several key North Atlantic species have been overfished in recent years.

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1. General Background

UK fishermen landed 589,000 tons of fish and shellfish worth nearly $695 million in 1992.[1] This was not sufficient to meet the demands of the island's 57 million consumers and represents a decline when compared with earlier years; UK fishermen landed 811,000 tons and ranked as the EC's third largest producer of fish and shellfish in 1990. British importers purchased 473,000 tons of seafood products worth $1.7 billion from overseas suppliers in 1992, as compared with exports of 410,000 tons worth $0.9 billion.[2] UK fisheries are divided among its main regions and include: England and Wales, Scotland, Northern Ireland, the Channel Islands, and the Isle of Man. Scottish fishermen normally produce the lion's share of UK fisheries followed by England and Wales.[3] The UK consumer is somewhat conservative in taste, preferring cod, haddock, saithe, plaice, mackerel, and herring. Dogfish is typically used to prepare "fish and chips," which is enjoyed as an inexpensive seafood meal. Scottish producers of farmed Atlantic salmon have expanded production significantly in recent years and can now meet most of the nation's demand for fresh and smoked salmon. Shrimp (prawns), Norway lobsters, crabs, mussels, scallops, and other shellfish are also popular items. UK fishermen are very independent and many downplayed or resisted efforts by scientists or fishery managers in the UK and the EC to warn them about deteriorating stock conditions or conserving species.[4] This led to overfishing of key species, such as cod, haddock, herring, and plaice in the North Sea and whiting in the Irish Sea.[5] EC Fisheries Commissioner Manuel Marin reported in December 1990, that reductions of as much as 40 percent were needed to restore some North Sea stocks.[6] Fleet reductions, special net mesh sizes and patterns, and other programs are being implemented or studied as a means of reducing by-catches of important species and allowing the key species to recover. Despite these problems, the UK fishing fleet appears healthy and landings of fish and shellfish appear steady. An overview of the United Kingdom fishing industry can be seen in tables 1-3.

2. Fleet Background

The strong point of the UK fleet had always been its distant-water capacity. Foremost among this was the block freezer stern trawler fleet, which originated in 1961 with the launching of the freezer trawler *Lord Nelson*. In 1962 the *Junella* followed, another freezer trawler with a 350 GRT capacity.[7] These vessels fished in the Northwest and Northeast Atlantic, as well as off the coasts of South Africa, Australia, and South America.[8] The UK fleet operated successfully from the 1960s until the early to mid-1970s.

The decline in the UK fishing fleet was signalled by the move of many nations to extend their national jurisdiction beyond the traditional 3 to 12 miles. The most significant setback to the UK fleet came in 1972 and in 1975 when Iceland extended control over its fisheries to 50 miles and then to 200 miles. These lucrative fishing grounds had attracted hundreds of UK fishing vessels and Iceland's move sparked a bitter confrontation known as the "Cod Wars." Ultimately Iceland prevailed and the UK fishing fleet was forced out of the area. This pattern was followed elsewhere in the world as many nations extended their exclusive economic zones to 200 miles. The UK high-seas fleet declined from 143 vessels in 1975 to 18 vessels in 1986 (see table 1). In 1982, The Boyd Line sold the two largest UK freezer stern trawlers, the *Arctic Buccaneer* and the *Arctic Galliard*, both 86 meters in length, to Fletcher Fishing of New Zealand.[9] The sale of the freezer *Pict* in 1986, marked the end of the UK freezer trawler fleet. Vessel owners continue to blame the British government for having been unwilling to support its fleet, as is the case with other EC states.[10]

UK fishermen believe they have fared poorly since their nation's entry into the EC. They have complained that other nations have won the right to fish in UK waters at the same time that the overall UK fishing effort has been curtailed, leaving the UK even worse off than it had been before 200-mile limits were established.[11] They also argue that Britain has been unwise in following EC guidelines to the letter while other member states have repeatedly ignored or failed to enforce these guidelines.[12] Flag of convenience vessels have become a major concern in the industry. A loophole in UK legislation allowed foreign vessels (especially 62 Spanish vessels in 1984[13]) to register under the British flag, allowing those vessels to fish within Community waters, as well as to evade stricter national regulations on the Continent. A 1984 law required British flagged vessels to be managed, directed, and controlled from within the UK. In 1990, the UK Government tightened these rules considerably, forcing all operators in UK fishing waters to make at least four visits to UK ports each year.[14]

The UK high-seas fleet underwent a dramatic reversal in 1988, when it doubled in size from 20 vessels to 41 vessels. This growth can be partially attributed to the Falkland's War, which opened up that island's fishery resources to British fishermen and also to the EC's vessel modernization program; most of the British high-seas fleet has continued to fish in the North Atlantic in recent years. This is somewhat curious, since fishery biologists and administrators have warned fishermen of declining stocks in the North Atlantic for several years. The UK high-seas fleet included 51 vessels in 1993.[15]

3. Modernization Programs

The UK government was reluctant to offer grants for modernization throughout most of the 1980s. Grants that were available were more often than not sponsored by the European Commission in Brussels.[16] The U.K. Ministry of Agriculture, Fisheries, and Food (MAFF) devised a program of "Seafish grants" which were available for the replacement of vessels lost at sea and for vessels 15 years and older. Under the program, modernization and replacement projects took priority over new vessels. MAFF approved 40 applications for grants through 1987, when the government decided to scale down the program.[17]

4. Decommissioning Programs

The MAFF announced in 1991 that there was "no prospect of the introduction of a decommissioning scheme."[18] The announcement was premature; on May 11, 1993, the Sea Fish (Conservation) Act was passed which provides for approximately $39 million in decommissioning funds for UK fishermen.[19] The most recent decommissioning scheme dates back to 1984, when London and the EC offered grants of $600 per ton decommissioned, which resulted in the withdrawal of dozens of vessels from the fishing industry.[20] Nonetheless, the present government cites the "mess" the program created as justification for not introducing another plan. There has recently been a great deal of concern on the part of vessel owners, who complain that current conservation policies (such as quotas) are not effective. The market for second-hand vessels is presently such that sales to third parties would not be a viable option, those in the industry argue.[21] In the 1992 election campaign, the opposition Labour Party promised to implement a decommissioning program if elected,[22] and European Community fisheries officials have actively encouraged the U.K. to set up a scheme to reduce fleet size.[23]

5. Shipyards

The UK shipbuilding industry has become more optimistic over the last few years. The downsizing of the 1980's seems to have made the industry more competitive, and shipyards like Harland and Wolff of Belfast have been receiving large commercial orders since 1990.[24] U.K. shipyards, which have recently completed fishing vessels, include Napier. Ltd. in Scotland, which has clients from as far away as New Zealand,[25] Cochrane Shipbuilders of Selby, Yorkshire,[26] Campbeltown Shipyard, which produced a special vessel to carry live salmon,[27] and James N. Miller and Sons of St. Monans, builders of the *Ulysses II*, a 27 meter seiner/trawler.[28] UK yards face their stiffest competition from aggressive Eastern European shipyards, especially those in Poland.[29] A likely area of future activity is joint ventures with Asian shipyards. British yards have already undertaken negotiations with potential Japanese and Korean partners.

6. International Agreements

Since the UK is a full member of the European Community, the European Commission in Brussels is responsible for UK external relations in the fisheries. EC fishery agreements have provided access to British vessels. In particular, UK fishermen regularly harvest Arctic cod in northern Norwegian waters under an EC-Norway agreement, though Norway has threatened to terminate the agreement on several occasions.[30] At the same time, Britain continues to maintain a handful of agreements with third parties. Britain is currently negotiating with Argentina over fishing conservation measures around the Falkland Islands in the South Atlantic within the framework of the Convention for the Preservation of Living Antarctic Sea Resources.[31] The two countries have been struggling to rebuild a South Atlantic hake fishery. Britain also has fisheries treaties with Canada dating back to the late 1970's.

7. Fleet Dispersal Plans

UK fishing vessels are not likely to take advantage of the EC agreement with Argentina, but will continue to fish off the Falkland Islands. Most UK vessels, however, will fish in the North Sea in their traditional fishing grounds. Continued reductions in Total Allowable Catches (TACs) in the North Sea and Irish Sea could stimulate some UK fishing companies to seek opportunities in more distant-waters. Joint ventures or distant-water operations most likely would occur in South Africa, Australia, or New Zealand. UK fishermen will be particularly interested in watching whether Norway joins the EC, since Norwegian waters are rich in many species prized by UK consumers. If Norway joins the EC, then UK vessels would ultimately be able to fish in Norwegian waters.

UK fishermen appear to have resisted the temptation to fish in distant waters, although one former UK-flag vessel, the *Arctic Cavalier* (764-GRT, built in 1960), was recently reflagged in Panama. The only other UK vessel known to the authors as having been reflagged in recent years is the *Triton*, a 39-GRT-vessel built in 1972. The vessel likely was sold to a Cypriot fishermen.

SOURCES

Eurofish Report, various issues.

European Supplies Bulletin, Annual Data, 1991, Sea Fish Industry Authority, Edinburg, 1993.

Fishing News, various issues.

Fishing News International, various issues.

"Fleet Suffers Shattering Blow as Two Top UK Freezers Sail With Crews to New Zealand," *The South African Shipping News and Fishing Industry Review*, March 1982

Food and Agriculture Organization of the United Nations, *Yearbook of FIshery Statistics - Catch and Landings*, Rome, various years.

Irish Skipper, various issues.

Office of Naval Intelligence, U.S. Navy.

Report from the Commission to the Council and the European Parliament on the Common Fisheries Policy, *Commission of the European Communities,* SEC (91) 2288, Brussels, December 18, 1991.

Seafood International, various issues.

"UK Agrees to Negotiate Fishing Activities Conservation," *La Nación*, reprinted in *FBIS Daily Report--Latin America*, 13 May 1993.

U.S. Embassy, London, various reports.

World Fishing, various issues.

United Kingdom

300 km
Shetland Islands
Orkney Islands
Hebrides
North Atlantic Ocean
Aberdeen
North Sea
Edinburgh
Belfast
Newcastle upon Tyne
Irish Sea
Liverpool
LONDON
Cardiff
English Channel

Table 1.--UK. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	**Gross Registered Tons (GRT)**						**Total**	
	500-999		**1,000-1,999**		**Over 2,000**			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	76,872	105	48,992	38	-	-	125,864	143
1976	59,234	82	56,096	43	-	-	115,330	125
1977	50,871	71	49,044	38	-	-	99,915	109
1978	41,144	58	46,660	36	-	-	87,804	94
1979	32,375	46	47,852	37	-	-	80,227	83
1980	27,300	40	47,773	37	-	-	75,073	77
1981	12,709	19	45,392	35	-	-	58,101	54
1982	12,794	19	28,832	23	-	-	41,626	42
1983	9,924	15	23,439	18	-	-	33,363	33
1984	7,931	12	21,417	16	-	-	29,348	28
1985	7,017	11	17,398	12	-	-	24,415	23
1986	6,541	10	11,820	8	-	-	18,361	18
1987	7,576	11	13,303	9	-	-	20,879	20
1988	16,179	23	25,087	17	2,031	1	43,297	41
1989	16,599	24	21,441	15	4,602	2	42,642	41
1990	15,975	24	18,364	13	7,482	3	41,821	40
1991	16,699	25	17,051	12	4,602	2	38,352	39
1992	16,544	25	18,180	13	7,024	3	41,748	41

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Table 2:--UNITED KINGDOM. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	150,592	130,380	121,656	116,556	131,312	145,377	137,566	138,000E	138,000E	138,000E
Total fishing fleet (Number of vessels)	7,227	7,584	7,920	8,166	8,204	8,132	8,283	8,000E	8,000E	8,000E
High-seas fleet (Number of vessels)	33	28	23	18	20	41	41	40	39	41
High-seas fleet (GRT)	33,363	29,348	24,415	18,361	20,879	43,297	42,642	41,821	38,352	41,748
Catch (metric tons)										
Scotland	550,081	602,034	663,522	629,021	665,046	666,089	588,410	570,541	570,089	580,000E
England and Wales	269,011	213,685	204,597	196,667	254,032	243,561	209,270	186,594	217,610	217,610E
Northern Ireland	20,864	20,517	23,291	24,691	26,307	27,827	25,694	35,567	35,526	26,524
Channel Islands	3,477	3,669	3,024	2,333	2,390	2,756	2,910	3,000	2,800	2,800E
Isle of Man	8,322	7,668	6,974	5,778	5,561	5,624	5,696	4,085	4,562	4,562E
Total UK catch	851,755	847,573	901,408	858,490	953,336	945,857	831,980	799,787	830,587	831,496
Fishermen (Number)	22,556	21,945	22,181	22,600	22,392	22,237	22,422	22,055	22,000E	22,000E

(E) = Estimate. Main sources: *Sea Fisheries Statistical Tables*, Government Statistical Service, London, various years and FAO, *Yearbook of Fishery Statistics, 1990*, FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet). Volume 70, United Nations, Rome, 1993.

Table 3.--UNITED KINGDOM. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	-	-	13.4	13.2	15.2	16.7	19.4	16.0	19.2
Coastal[a] (Northeastern Atlantic and Baltic Sea, FAO area 27)	977.5	831.2	885.2	843.1	933.8	919.4	799.6	781.1	809.2
Distant-water:									
NE Atlantic, FAO area 21	2.2	0.9	-	-	0.8	0.9	3.7	1.3	0.1
SW Atlantic, FAO area 41	-	-	-	-	3.5	8.9	9.3	1.4	2.0
S Atlantic, FAO area 48	-	-	-	-	-	0.1	ngl	0.1	0.1
W Indian Ocean, FAO area 51	-	-	2.8	2.3	-	-	-	-	-
Sub-toal	2.2	0.9	2.8	2.3	4.3	9.9	13.0	2.8	2.2
Total	979.7	832.1	901.4	858.6	953.3	946.0	832.0	799.9	830.6

Source: FAO, *Yearbook of Fishery Statistics*, various years.

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[a] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

ENDNOTES

1. *European Supplies Bulletin,* Annual Data, 1991, Sea Fish Industry Authority, Edinburgh, 1993, p. 52.

2. *European Supplies Bulletin,* Annual Data, 1991, Sea Fish Industry Authority, Edinburgh, 1993, pp. 53-61.

3. Food and Agriculture Organization, *Yearbook of Fishery Statistics - Catch and landings*, United Nations, Rome, various years.

4. "Comment," *Seafood International,* February 1991, p. 5.

5. Report 1991 from the Commission to the Council and the European Parliament on the Common Fisheries Policy, *Commission of the European Communities,* SEC (91) 2288, Brussels, December 18, 1991, pp.46-47.

6. "Marin plans 40% cut in EC fishing capacity over 10 years," *Eurofish Report*, December 6, 1990, p. BB/1.

7. Tim Oliver, "Freezer Fleet Felled by Government Neglect," *Fishing News*, July 11, 1986, p. 6.

8. Tim Oliver, "Freezer Fleet Felled by Government Neglect," *Fishing News*, July 11, 1986, p. 6.

9. "Fleet Suffers Shattering Blow as Two Top UK Freezers Sail With Crews to New Zealand," *The South African Shipping News and Fishing Industry Review*, March 1982, p. 29.

10. Tim Oliver, "Freezer Fleet Felled by Government Neglect," *Fishing News*, July 11, 1986, p. 6.

11. Ian ManSween, "The UK Fishing Industry in the Eighties," *Eurofish Report*, June 11, 1980, p. FS/6.

12. Tim Oliver, "Freezer Fleet Felled by Government Neglect," *Fishing News*, July 11, 1986, p. 6.

13. This was 2 years *before* Spain joined the European Community.

14. "UK Tightens Fishing License Rules for Foreigners," *Eurofish Report*, November 22, 1990, p. FS/1.

15. Office of Naval Intelligence, U.S. Navy.

16. "British Fleet Cutback with EEC Help," *Fishing News International*, September 1984, p. 2.

17. "Grant Approval Not Automatic," *Fishing News*, November 27, 1987.

18. "No Prospect of Scrapping Cash," *Fishing News*, February 22, 1991.

19. "UK Sea Fish Act passed amid fishermen's protests," *Eurofish Report*, May 20, 1993, p. FS/1.

20. "Britain's Fishing Fleet Continues to Run Down," *Irish Skipper*, September, 1985.

21. "No Prospect of Scrapping Cash," *Fishing News*, February 22, 1991.

22. "Labor Pledge on Decommissioning," *Fishing News*, March 15, 1991.

23. "The EEC Backs Decommissioning," *Fishing News*, November 4, 1988.

24. U.S. Embassy, London, September 13, 1991.

25. "Scottish Naval Architect Remains Busy," *World Fishing*, March 1991, p. 46.

26. "Order for 125 ft. Stern Trawler," *Fishing News*, March 10, 1989.

27. "Campbeltown Shipyard Wins £1M Order for Live Salmon Transporter," *World Fishing*, November, 1988, p. 34.

28. Jim Mair, "*Ulysses* Set for Trawling," *Fishing News*, July 29, 1988, p. 8.

29. U.S. Embassy, London, September 13, 1991.

30. "Norway Ban Would Be Total Disaster," *Fishing News*, November 17, 1989, p. 4.

31. "UK Agrees to Negotiate Fishing Activities Conservation," *La Nación*, reprinted in *FBIS Daily Report--Latin America*, 13 May 1993, p.1.

3

NON-EC COUNTRIES

The non-EC fishing countries in Western Europe in 1993 include Cyprus, the Faroe Islands, Finland, Greenland, Iceland, Malta, Norway, Sweden, and Turkey. Greece joined the EC in 1981 and Portugal and Spain became members in 1986. Sweden is currently being considered for membership in the EC and is expected to join that body in 1995. The Faroe Islands and Greenland, although independent, have their international relations and defense administered by Denmark. These nations operate their fishing fleets independently, in contrast to the 12-member EC which operates as a single body. The non-EC high-seas fishing fleet declined from a high of 436 vessels in 1978 to a low of 166 vessels in 1987, shortly after Portugal and Spain joined the Community (Appendix 1 and Figure 5). The fleet has since increased to 213 vessels in 1992. These expanding fishing fleets are largely deployed on coastal grounds.

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I. COUNTRY SUMMARIES

The non-EC fishing fleets included about 19,000 vessels registering about 508,000 tons in 1992. This included approximately 213 high-seas fishing vessels registering over 214,000 gross registered tons.

Unlike the EC, where fishing is controlled by a central authority, the fishing industries of the non-EC countries of western Europe are the responsibilities of each individual country. The growth or decline of the fishing industry, thus, is a matter of developments in each individual country. A summary of the fishing industry of each non-EC country follows.

- **Cyprus**: One tuna purse seiner, *Isabel Tuna*, was registered on the Cypriot list of fishing vessels in 1991. The vessel fishes in the Eastern Tropical Pacific. There were 3 high-seas vessels on the Cypriot fishing fleet in 1992 and this jumped to over 30 vessels in 1993. Many of the vessels registered in Cyprus in 1993 were well over 500-GRT, including a former Russian reefer registering 11,755-GRT. One of the largest fishing vessels was the *Galina*, a 4,038-GRT factory trawler built in Poland.

- **Faroes:** The Faroese fleet increased in the mid-1980s as a result of government subsidies. In 1987, statistics about the Faroese fishing fleet were listed under Denmark by *Lloyd's Register*, and no further statistical breakdown of information is available for that country.[1] In the 1990s, severe economic problems associated with the previous administration, caused many fishing companies to go bankrupt and many fishing vessels have been sold in recent months. Most of the Faroese fleet fishes in the North Sea and has shown little interest in distant-water operations, although one company attempted to begin a fishing operation off South Africa and another company recently began fishing in New Zealand.

- **Finland:** The last Finnish high-seas vessel was sold in 1981 and has not been replaced. Finland is unlikely to return to high-seas fishing.

- **Greenland**: The Royal Greenland Trade Company bought its first high-seas vessel in 1964. The high-seas fleet includes around 25 vessels, but statistical information about Greenland's fishing fleet is not published by *Lloyd's Register*. The fleet expanded rapidly in the 1980s, fishing for deepwater shrimp and cod. In the 1990s, however, the cod resource declined and this resulted in economic dislocation, causing some vessels to be sold. There are also too many vessels fishing for shrimp and this fishery is being trimmed.

- **Iceland:** The high-seas fleet grew modestly in the 1970s, in part due to the displacement of foreign fishermen from Icelandic coastal waters, reaching 33 vessels in 1987. This was followed by rapid expansion from 42 vessels in 1988 to 61 vessels in 1992. High prices for fresh fish in UK and German ports prompted many Icelandic fishermen to invest in new vessels. The decline in the biomass of Atlantic cod, however, has hurt the industry and caused some fishermen to sell their vessels.

- **Malta**: There is one high-seas vessel registered in Malta, but the authors have no information about the vessel and its operations.

- **Norway**: The Norwegian high-seas fleet is growing the fastest, expanding from 72 vessels in 1975 to 139 vessels in 1992. The recovery of capelin and Atlantic cod stocks in recent years helps explain the growth of the Norwegian fleet. The majority of the Norwegian fleet fishes in the North Atlantic and shows little interest in shifting to distant fishing grounds, although a few individuals have attempted to find opportunities far from Norwegian waters.

- **Sweden:** Swedish fishermen have expanded their high-seas fleet in recent years to a total of 8 vessels. This is surprising given the problems associated with Baltic fisheries and the authors are unable to explain why the Swedish fleet has expanded.

- **Turkey:** Only one high-seas vessel is registered in Turkey. The authors have no information about this vessel and its operations.

II. LIMITATIONS TO FISHING

Most Nordic countries extended their jurisdictions to 200 miles in the mid-1970s. It was natural for Nordic fishermen to replace foreign fishermen and this explains why the Faroe Islands, Iceland, and Greenland all expanded their fleets in the 1970s. Other countries, such as Finland, Norway, and Sweden, had few options; they were excluded from their former fishing grounds and were forced to fish inside their own waters. Many of these nations have now reached the point where it is increasingly difficult to expand their fisheries. Even Iceland, which displaced foreign fishermen during the 1970s and early 1980s, is now reporting depleted stocks. As a result, the non-EC fishermen increasingly face the same difficulties obtaining access to adequate stocks that EC fishermen face. Most of these countries have large fleets of vessels that could be deployed in distant-water fisheries, but they are unlikely to do so. Most vessels built for Nordic fishermen are built to operate in Arctic conditions, which limits their effectiveness to cold waters. The Norwegians, fortunately, are the exception. They have ample room to fish off their coasts and have seen tough management regimes help cod stocks return to Norwegian waters in abundance. The Norwegians are among the few fishermen in the world that are catching good quantities of Atlantic cod in 1992-93.

III. CONTROLLING FLEET EXPANSION

The non-EC Nordic countries have also maintained incentive programs to control the growth of their fishing fleets. The programs, however, have generally failed to limit fleet expansion. Norway and Iceland are the two major non-EC fishing countries. Efforts to limit the Norwegian and Icelandic fleets appear to have stimulated the expansion of the fleet by withdrawing older, less efficient vessels. The fishermen have used the Government incentives to build more modern, efficient vessels with a larger fishing capacity.

IV. POTENTIAL FOR RELOCATING FLEETS

The authors believe that the non-EC Nordic countries will not relocate large numbers of high-seas fishing vessels in the immediate future. This is especially true for Norway; landings of cod and other species have increased in Norway and shipyards are busy building new high-seas fishing vessels[2] for Norwegian and other fishermen around the world. There is always the possibility that small numbers of vessels could be deployed in distant-water fisheries or sold to fishermen in developing countries. Norwegian and Icelandic fishermen, however, have little experience with distant-water operations outside the North Atlantic. The complexity of such operations suggests that they are unlikely to shift their operations beyond the North Atlantic in the 1990s. Used vessel sales are another possibility. Such sales, however, have not been extensive in the past, even during periods of declining catches. Major reductions in fishing effort could possibly heighten interest in selling vessels. Icelandic and Norwegian fishery officials and businessmen have shown some interest in Latin American countries. Such interest, however, centers more on the sales of new vessels and equipment than the sale of used vessels. The downturn in fishing off the Faroe Islands, however, has impacted that nation's fisheries and may lead to a reduction in the relatively small Faroese fishing fleet. Some Faroese vessels might be sold to third parties, possibly in South America or Russia. The authors would not be surprised if as many as 30 Nordic vessels were sold in the next one to two years.

Cyprus, Malta, and Turkey operate only a few large fishing vessels and are not expected to alter their fishing patterns significantly in the next few years. Cyprus and Malta, however, have become centers for reflagging operations and this process could continue in the future.

An in-depth analysis of the fisheries of the various non-EC fisheries follows in the "Country Reports" which follow. These reports provide greater information on present and future developments for fleet deployment in the non-EC countries of Western Europe.

SOURCES

World Fishing, March 1993

ENDNOTES

1. No statistical information is available from *Lloyds Register of Shipping*.

2. In 1992, Norwegian shipyards launched several new, high-seas vessels including the *Ligrunn* (768-GRT) for a French owner, the *Vigri* (1,217-GRT) for an Icelandic owner, the *Northern Osprey* (2,700-GRT) for a Canadian firm, the *Bjarne Nilsen* (528-GRT) for a Norwegian owner, the *Tjaldur* (688-GRT) for an Icelandic firm, and the *Amaltal Colombia* (1,900-GRT) for a New Zealand firm. *World Fishing*, March 1993, pp. 51-54.

NON-EC COUNTRY REPORTS

3.1

CYPRUS

Cyprus is a small country with very limited fishery resources. It has fishing grounds suited only for small fishing vessels. Any vessels over 100-Gross Registered Tons (GRT) are unlikely to be operated by local fishermen, but are reflagged for operations in other areas. Cyprus had a only one reflagged vessel, the tuna purse seiner *Isabel Tuna*, on its registry in 1991. There were 3 reflagged vessels registered in 1992 and 31 reflagged vessels flying the Cypriot flag in 1993. **Cyprus now appears to be a major European center for reflagging**. It appears likely that other vessels will reflag in Cyprus in the future.

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1. General Background

Cyprus, a small island about the size of Connecticut, has only limited resources inside its Exclusive Economic Zone (EEZ). The island's Greek and Turkish populations clashed in 1974, resulting in two *de facto* autonomous zones: a Greek area controlled by the Cypriot Government (about 65-percent of the island) and a Turkish-Cypriot area (35-percent of the island, which declared itself the Turkish Republic of Northern Cyprus on November 15, 1983). The conflict uprooted the lives of the island's inhabitants and disrupted fishing patterns. The island has a small fleet of mostly wooden vessels that catch only modest quantities (1,500 to 2,600 tons) of fish and shellfish for sale in local markets.

The arrival of a growing number of tourists has stimulated the demand for fresh fish. Cypriot fishermen landed an estimated 2,690 tons of fish and shellfish in 1992. Cyprus is a major center for maritime vessels that enjoy special regulations and tax incentives for registering under the Cypriot flag. One tuna seiner, the former Spanish-flag *Isabel Tuna*, began fishing in the Pacific Ocean flying the Cypriot flag in 1991. There were 3 reflagged vessels in 1992 and 31 fishing vessels flying the Cypriot flag in 1993. Few of these vessels are expected to fish in Cypriot waters; most have been reflagged and will fish far from Cyprus.

2. Fleet Background

The Cypriot fishing fleet is considered small by most standards. The nation's fishing fleet consists mostly of small rowboats or wooden sailboats. The trawler fleet has fluctuated greatly during the past 3 decades. In 1952, for example, the trawl fleet consisted of 10 vessels. The fleet remained at 12 vessels between 1961 and 1979, when the number declined to 8 vessels.[1] In 1974 hostilities divided the island into two de facto autonomous areas, a Greek area controlled by the Cypriot Government and a Turkish-Cypriot area.[2] The conflict resulted in the loss of nearly 40 percent of the fishing grounds and disrupted fishing for many years.

The Government of Cyprus first attempted to control fishing off the coast of Cyprus by limiting the number of trawlers to 10 licensed Cypriot trawlers in 1952.[3] This number was increased to 12 trawlers in 1961.[4] The number of trawlers fluctuated between 10 and 12 until 1979, when the number declined to 9 vessels.[5] The Cypriot trawler fleet typically consisted of 8 medium-sized wooden trawlers and 3 medium-sized steel trawlers.[6] The Fisheries Department of Cyprus implemented several programs to restrict fishing effort in 1982. One measure was to restrict the number of trawlers allowed to fish. The government also enacted closed fishing seasons. Between 1982 and 1984 the trawler fleet included only 8 vessels, which included 2 high-seas vessels (a 570-GRT vessel and a 2,584-GRT vessel). The artisanal fleet grew rapidly as tourists visited Cyprus and began paying high prices for fresh fish; the fishing fleet reached 97 artisanal fishing boats in 1986 and in 1988 grew to 117 inshore vessels and 2 licensed trawlers.[7] A new vessel (a 1,533-GRT) was added in 1987. Another new vessel, a 5,624-GRT vessel, appeared on Cypriot rolls in 1992. The authors have no information about these vessels. It is highly unlikely that these giant vessels are fishing in coastal waters off Cyprus or that they are fishing to supply the tourist trade on Cyprus (table 1).

The Inter-American Tropical Tuna Commission (IATTC) reported that the *Isabel Tuna*, a Cypriot-flag tuna purse seiner, entered the IATTC tuna fishing grounds for the first time in 1991.[8] The U.S. Department of State advised the Government of Cyprus of United States laws regarding requirements for countries with purse seine vessels fishing for tuna in the region.[9] On March 12, 1992, the Economic Officer of the U.S. Embassy in Nicosia met with officials of the Government of Cyprus to review the question of Cypriot-flag vessels fishing for tuna in the Pacific. Cypriot officials indicated that a directive has been sent to all fishing vessels flying the Cypriot flag concerning U.S. regulations.[10] The *Isabel Tuna* fished for yellowfin tuna in the IATTC area of the Pacific throughout 1992 and into 1993.[11] The FAO statistical table does not reflect any catches in the Pacific Ocean (FAO area 87) for 1991 (table 2).

In August 1993, the Office of Naval Intelligence, identified 31 fishing vessels reflagged in Cyprus; the vessels ranged from the *Triton* (a 39-GRT vessel built in the UK in 1972) to the *Klaipedskii Bereg* (11,755-GRT Russian refrigerated vessel built in East Germany in 1990). See table 4 for a listing of reflagged vessels registered in Cyprus in 1993.

3. Modernization Programs

All new fishing vessels entering the Cypriot fishing fleet reportedly at limited to 250-horsepower engines and must displace an old vessel of a similar size. This, reportedly, has limited the growth of the Cypriot fishing fleet to a total of 8 trawlers.[12]

4. Decommissioning Programs

The authors are not aware of any decommissioning programs.

5. Shipyards

Cypriot shipyards probably can build and repair small wooden boats and possibly some steel-hulled vessels. The authors have very little additional information about Cypriot shipyards.

6. International Agreements

Cypriot trawlers once fished off the coasts of Egypt and Israel where they averaged about 500 kilograms of fish on a daily basis. No additional information is available to the authors about international fishery agreements reached by Cyprus and other countries.

7. Fleet Dispersal Plans

The authors have no information about the operations of the Cypriot high-seas fleet, except for the *Isabel Tuna*.

SOURCES

FAO Country Profiles, "CYPRUS: The high-priced luxury food," *Fishing News International*, January 1980, p. 37.

Farrugio, H. "L'Exemplaire aménagement de la pêche à Chypre," *Equinoxe*, June 24, 1988, p. 37.

Garcia, S. and A. Demetropoulos, "Management of Cyprus fisheries," *FAO Fisheries Technical Paper*, No. 250, Food and Agriculture Organization of the United Nations, Rome, 1986, p.1.

Inter-American Tropical Tuna Commission, *Quarterly Report, Fourth Quarter, 1991*, ISSN 1048-6259, La Jolla, 1992, p.25.

"Regulations governing the harvesting and exporting of yellowfin tuna in the Eastern Tropical Pacific Ocean," U.S. Department of State, Washington, D.C. January 22, 1992.

U.S. Embassy, Nicosia, various reports.

World Factbook, 1991, Central Intelligence Agency, Washington, D.C

Cyprus

50 km
Mediterranean Sea
Rizokarpaso
Kyrenia
United Nations Buffer Zone
Turkish-Cypriot-administered area
NICOSIA
Famagusta
Polis
Area controlled by Cyprus Government (Greek area)
Larnaca
Paphos
Vasilikos
Episkopi
Limassol
Mediterranean Sea

Table 1.--CYPRUS. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	-	-	-	-	-	-	0	0
1976	-	-	-	-	-	-	0	0
1977	-	-	-	-	-	-	0	0
1978	1,227	2	1,176	1	-	-	2,403	3
1979	544	1	2,653	2	-	-	3,197	3
1980	570	1	-	-	-	-	570	1
1981	570	1	-	-	2,584	1	3,154	2
1982	570	1	-	-	2,584	1	3,154	2
1983	570	1	-	-	2,584	1	3,154	2
1984	570	1	-	-	2,584	1	3,154	2
1985	570	1	-	-	4,885	2	5,455	3
1986	570	1	-	-	2,584	1	3,154	2
1987	570	1	1,533	1	2,584	1	4,687	3
1988	570	1	1,533	1	2,584	1	4,687	3
1989	-	-	1,533	1	-	-	1,533	1
1990	-	-	1,519	1	-	-	1,519	1
1991	-	-	1,737[a]	1	-	-	1,737	1
1992	-	-	1,737	1	5,624	2	7,361	3

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[a] This vessel presumably is the *Isabel Tuna* which was first listed on the IATTC fleet list in 1991.

Table 2.--CYPRUS. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Coastal (Mediterranean, FAO area 37)	1.0	1.3	2.4	2.6	2.6	2.5	2.6	2.6	2.6
Total	1.1	1.4	2.5	2.7	2.7	2.6	2.7	2.7	2.7

Source: FAO, *Yearbook of Fishery Statistics,* various years.

Table 3.--CYPRUS. Listing of reflagged fishing vessels registered in 1993.

Name	Tonnage	Country and year the vessel was built		Previous flag	Vessel type
		Country	Year		
	Gross Registered Tons				
Admiral Zavoiko	1,899	Norway	1991	Russian	Factory trawler
Aleksey Chirikov	1,899	Norway	1990	Russian	Factory trawler
Atlantis IX	152	Australia	1979	Australia	N.A.
Avangard	2,649	Norway	1989	Russian	Factory trawler
Buccaneer I	152	Australia	1879	Australia	N.A.
Bukhta Naezdnik	1,899	Norway	1991	Russian	Factory trawler
Caribic II.	3.431	Japan	1972	Japanese	Factory trawler
Chiquita Abava	7,390	Poland	1992		Reefer
Eefeje[b]	100	Netherlands	1985		N.A.
Fisherman	442	France	1972		N.A.
Galina	4,038	Poland	1992		Factory trawler
Gerda	492	Netherlands	1989	Netherlands	N.A.
Grand Fisherman	375	Iceland	1977		N.A.
Isabel Tuna	2,161	Spain	1991		Tuna purse seiner
Jan Willem[c]	153	East Germany	1968		N.A.
Klaipedskii Bereg	11,755	East Germany	1990	Russian	Reefer
Kurpie	8,864	Poland	1988	Poland	Reefer
Lenabella	106	Poland	1967		Cutter
Mary Rose	106	Poland	1967		Cutter
Mys Vindis	1,899	Norway	1991	Russian	Factory trawler
Naftilos III.	118	Australia	1978		N.A.

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[b] Decommissioned from EC rolls on October 20, 1988. No information available on the new buyers of the vessel.

[c] Decommissioned from EC registry on October 24, 1988. No information on the new buyer.

Naftilos IV.	122	Australia	1979		N.A.
Novik	1,899	Norway	1991	Russian	Factory trawler
Petr Iljin	1,919	Norway	1992	Russian	Factory trawler
Poolster	129	East Germany	1970		N.A.
Rex	626	Japan	1973		N.A.
Santa Maria	105	Netherlands	1961		N.A.
Sterkoder	1,899	Norway	1991	Russian	Factory trawler
Thalie Zachos	121	France	1956		N.A.
Triton	39	U.K.	1972		N.A.
Vilyuchinskiy	1,899	Norway	1990	Russian	Factory trawler

Source: Office of Naval Intelligence, U.S. Navy.

ENDNOTES

1. H. Farrugio, "L'Exemplaire aménagement de la pêche à Chypre," *Equinoxe*, June 24, 1988, p. 37.

2. *The World Factbook, 1991,* Central Intelligence Agency, Washington, D.C., p.77. The report notes that the UK maintains military bases in Cyprus which account for the remaining 5 percent of the land area.

3. S. Garcia and A. Demetropoulos, "Management of Cyprus fisheries," *FAO Fisheries Technical Paper*, No. 250, Food and Agriculture Organization of the United Nations, Rome, 1986, p.1.

4. S. Garcia and A. Demetropoulos, "Management of Cyprus fisheries," *FAO Fisheries Technical Paper*, No. 250, Food and Agriculture Organization of the United Nations, Rome, 1986, p.1.

5. S. Garcia and A. Demetropoulos, "Management of Cyprus fisheries," *FAO Fisheries Technical Paper*, No. 250, Food and Agriculture Organization of the United Nations, Rome, 1986, p.1.

6. FAO Country Profiles, "CYPRUS: The high-priced luxury food," *Fishing News International*, January 1980, p. 37.

7. "Agriculture in Northern Cyprus," U.S. Embassy, Nicosia, October 17, 1989.

8. Inter-American Tropical Tuna Commission, *Quarterly Report, Fourth Quarter, 199*1, ISSN 1048-6259, La Jolla, 1992, p.25.

9. "Regulations governing the harvesting and exporting of yellowfin tuna in the Eastern Tropical Pacific Ocean," U.S. Department of State, Washington, D.C. January 22, 1992.

10. "GOC response on yellowfin tuna," U.S. Embassy, Nicosia, March 13, 1992.

11. Inter-American Tropical Tuna Commission, *Quarterly Report, First Quarter, 1993*, ISSN 1048-6259, La Jolla, 1993, p. 35.

12. H. Farrugio, "L'Exemplaire aménagement de la pêche a Chypre," *Equinoxe*, June 24, 1988, p. 37.

3.2

FAROE ISLANDS

The Faroese fishing fleet in 1992 consisted of 217 wooden and steel vessels (59,539-GRT), including 25 modern high-seas trawlers that normally fish the rough waters of the North Atlantic. The Faroe Islands have been buffeted by economic dislocation and the decline in lucrative whitefish stocks. Many ultra-modern Faroese trawlers are for sale at "bargain" prices and many have been sold to customers around the world. Additional Faroese high-seas trawlers are expected to be sold in the next 2-3 years. The Faroe Islands remain dependent upon distant-water fishing grounds, primarily off Labrador, Greenland, and Norway, for approximately half of their catch. Although one distant-water venture off South Africa was attempted (which failed) and one venture in New Zealand began in 1990, the Faroese are not expected to seek distant fishing grounds outside of the North Atlantic in the near future.

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1. General Background

The Faroe Islands, a remote group of 18 islands situated between Scotland and Iceland, have a long tradition of fishing. The Faroes' 200-mile Exclusive Economic Zone (EEZ) includes 274,000 square kilometers of fishing grounds. This area is influenced by the mixing of the warm Gulf Stream and cold northern currents; this confluence generates large quantities of plankton and results in excellent feeding conditions for many species of fish. The basis of the Faroese economy is fishing. Exports of fishery products account for over 90 percent of the nation's total foreign exchange earnings. In recent years, the catch of "traditional" species, cod, haddock, and whiting, declined as the loss of distant fishing grounds, biological fluctuations, and overfishing have slowly taken their toll. The Faroese Government responded to the loss of distant fishing grounds and the decline in lucrative local species by providing massive subsidies to both the fishing fleet and onshore processing industries. The subsidy program, although well intentioned, added further pressure on overfished local stocks and eventually undermined the economic efficiency of the industry, leading to bankruptcies in the 1990s. Despite massive subsidies, the Faroese catch declined from 390,000 tons in 1987 to 251,000 tons in 1992.[1]

In early 1993, the Faroese Home Rule Government, in agreement with the Danish Government, established a Faroese/Danish working group, called the "Structural Committee" to review the short-term and long-term consequences of the Faroese fishing fleet. The study, which was released on July 1, 1993, deals with the "fresh fish" (coastal) fleet and does not deal with the high-seas fleet. The committee acknowledged that the Faroese fishing fleet was too large for the available resources, but did not recommend a reduction in the size of the fleet.[2] The committee did not want to propose measures which would increase unemployment, widen the income gap, or add increased pressure on public budgets. It has, therefore, recommended that the number of fishery licenses in the Faroe Island's coastal fleet be kept at the July 1, 1993 level.[3] An overview of the Faroese fishing industry can be seen in tables 1-7.

2. Fleet Background

The first Faroese vessel to begin fishing in distant-waters was the *Fox*, a 28-year old sloop purchased from a fisherman in Grimsby, England in 1870.[4] The vessel, was used to fish off Iceland. Many Faroese fishermen followed in these footsteps by buying used boats in England for fishing off Iceland.[5] A century later, the Faroese fishing fleet was profitably fishing in 3 different zones: **coastal waters** (inside the Faroese 200-mile EEZ), **middle waters** (off Iceland, eastern Greenland, the North Sea, the Baltic, Norway, and Rockall, UK), and **distant-waters** (Newfoundland, western Greenland, off Norway, including the Norwegian Sea and the Barents Sea, shown in table 6). The establishment of 200-mile EEZs in the mid-1970s, however, adversely affected the Faroese fishing industry and caused a period of painful economic readjustment for the whole Faroese economy.[6] In the early 1980s, recognizing the loss of their former fishing grounds, and faced with possible overfishing of their own waters, the Government embarked on a program to modernize the Faroese fisheries. The Government's plan was twofold: first, to support the construction of new vessels which could fish for new species of fish, thereby reducing pressure on overfished species. This included the construction of vessels which could trawl in very deep waters within the Faroese 200-mile zone. Second, it was designed to modernize both onshore and offshore processing, to produce higher quality products at more competitive prices for export customers. One of the first vessels purchased under this program, was the *Reynsatindur*, a 3,800-Gross Registered Ton (GRT) vessel designed to catch and process abundant stocks of blue whiting for conversion into surimi (minced fish meat). This vessel was purchased from Italy in 1983[7] as part of the program to shift the operations of the fishing fleet away from traditional species; blue whiting was abundant and production of the value-added surimi appeared to be logical. The potential pitfalls of the massive subsidy program, however, were becoming clear as early as 1985,[8] but rather than reducing subsidies, the Home Rule Government spent more money on the modernization of the fleet. In 1986, the Government earmarked $188 million to build 19 new vessels, including 4 shrimp trawlers, 1 or 2 scallop trawlers, 4 longliners, 4 blue whiting trawlers, and 5 or 6 other vessels to replace outdated vessels.[9] The increased size of the Faroese high-seas fishing fleet could be seen in the period 1983-86 (tables 1 and 2 and figure 1). The Faroese highs-seas fishing fleet in 1988 consisted of 35 vessels:[10] 13 shrimp trawlers,[11] 15 purse seiners and blue whiting trawlers and 7 saltfish trawlers and longliners.[12] The high-seas fleet declined to 25 vessels by 1990 as economic dislocations forced many companies to reduce their operations or sell off their vessels (table 3).

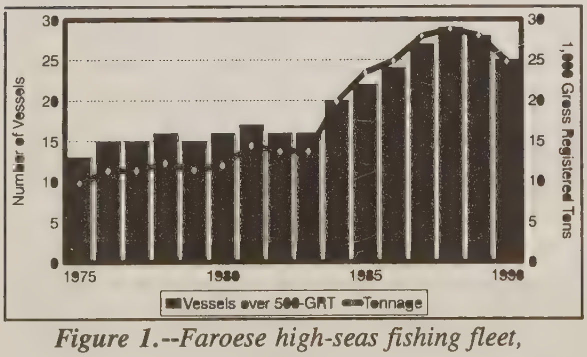

Figure 1.--Faroese high-seas fishing fleet, 1975-92.

Fishing beyond the Faroese 200-mile EEZ remains an important source of fish to Faroese fishermen; 123,000 tons out 251,000 tons were taken in high-seas fisheries in 1992 (Table 6 and figure 2).[13] More than half of the cod and all of the shrimp caught in 1992 came from waters outside of the Faroe Islands.[14] It is noteworthy that the Faroese catch of cod has declined from 43,900 tons in 1989 to 20,800 tons in 1992. The catch of shrimp went from 14,000 tons to 10,900 tons during the same period. Landings of haddock and saithe also declined signficantly during the same years. In 1992, however, the catch of blue whiting, capelin, and mackerel increased and this helped reverse the decline in landings which bottomed out at 231,670 tons in 1991.[15]

The largest high-seas fleet operator is J.F. Kjølbro of Klaksvík. The firm operates 4 trawlers which fish in the Barents Sea, Greenland, and Labrador. The company produces saltfish aboard their vessels for exports to Spain, Italy, and Greece.[16] The company purchased two of their massive stern trawlers, the *Sundalberg* and another vessel, from Norway in October 1988 and February 1989.[17]

Fishing and the national economy are closely linked in the Faroe Islands. Huge investments in infrastructure since the early 1970s, together with investments in, and significant subsidies to, the fisheries sector eroded the country's economic basis and resulted in a $1.3 billion debt by 1990.[18] The fishing industry generates $400 million in export earnings annually and accounts for over 90 percent of the nation's total export earnings. This is far below the amount needed to keep pace with the massive subsidy program which has sapped the country's economic strength.[19] During the past few years, subsidies to the fishing industry have been gradually reduced and a complete halt in subsidy expenditures is planned for the next few years.[20]

3. Modernization Programs

The Færøsernes Realkreditinstitut provides first mortgages for up to 50 percent of the value of a new fishing vessel. The Denmark Fiskeribank grants second mortgages (15- to 20-percent) and the Faroese Government provides, under certain circumstances, the third mortgage.[21] An additional source of loans for large fishing vessels or comes from Denmark Skibskreditfond.[22]

Following the creation of many new 200-mile EEZs, the Government of the Faroe Islands embarked on a program to modernize both the fleet and onshore processing sectors. Funds were made available to encourage fishermen to look for new species of fish. Many fishermen, stimulated by these subsidized programs, invested heavily in ultra-modern, and very expensive, new fishing vessels in the late 1980s.[23]

The Faroese high-seas fishing fleet in 1990 consisted of 25 high-seas fishing vessels registering 24,700-GRT. The fleet includes one super purse seiner registering just over 2,000-GRT (Table 1). The outlook for the Faroese fisheries, including the high-seas fleet, remains clouded by both economic and biological considerations.

Despite gloomy predictions about the fishing industry, *Fishing News International* reported that Faroese buyers were negotiating with Fishery Products International of Newfoundland, Canada concerning the potential purchase of 15 stern trawlers.[24] Thus, despite problems the fishing industry appears optimistic and it is possible that the Faroese fishing fleet could expand in the near future.

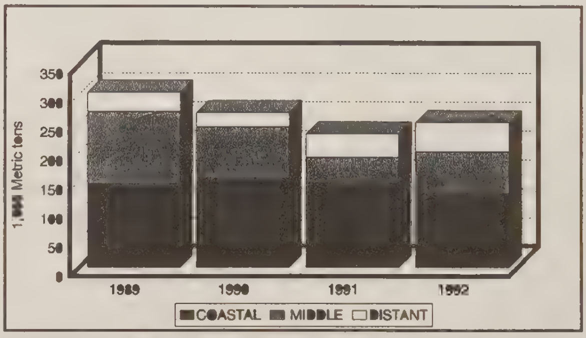

Figure 2.--*Faroese fisheries catch, by fishing grounds, 1989-92.*

4. Decommissioning Programs

Unfortunately, the modernization program failed to halt the country's declining catches. Faced with growing economic difficulties, the Faroese decided to scrap many of their vessels in early 1989.[25] Many of the vessels purchased in 1987 and 1988 are now laid up as they are unable to compete economically in world markets without continued subsidies, particularly in the face of declining stocks at home and abroad. As a result, vessels which cost $15 million to build only a few years ago are being offered for sale for half that price.[26] Since 1989, there has been a continuous reduction of the fishing fleet. This is due mainly to bankruptcies among the owners of fishing vessels. A decommissioning program adopted by the Government of the Faroe Islands in 1990 has also had an impact on this reduction.[27] The Faroese fishing fleet has been reduced by some 20 percent since 1989, both by sale to buyers in overseas markets as well as by scrapping.

The target is for a further reduction in the size of the fleet and sales of Faroese vessels have continued well into 1993. Four Faroese trawlers, for example, were sold at auction in South Africa after accumulating debts while attempting to fish off Namibia. On March 1, 1993, the *Sudurhavid, Midhavid, Ferina Suna* and *Ferina Star* were sold at auction to South Africa's Irvin & Johnson, a firm identified only as Oceanos, and a firm identified as Namibian Sea Fisheries.[28] Seventeen Faorese fishing vessels were auctioned off in June 1993, as banks sought to recover their investments. Another 30 to 40 vessels are now available for sale. The auction attracted buyers from as far away as New Zealand. Prices for some of these vessels were 40 to 50 percent below normal prices.[29]

The Faroese Government provides subsidies to fishermen willing to scrap their vessels. No information is available on the amount of these subsidies.[30]

5. Shipyards

The Faroese have 2 large shipyards and several smaller shipyards which undertake both repairs and the construction of new vessels. Vessels up to about 2,000 tons deadweight can be built in the Faroe Islands. The Skala Shipyard built the *Heygadrangur* as a blue whiting processor. The ship was built in 1988 as part of the program to develop offshore resources; the original owner was unable to pay for the ship and, as a result, it was eventually sold at a bargain price to a buyer in Orkney, Scotland.[31]

6. International Agreements

The Faroese have been fishing in international waters for over a century. During the last 100 years, the Faroese fisheries became dependent on distant fishing grounds for well over half their total fisheries catch. In the 1970's, increasing numbers of countries extended their EEZ to 200-miles. The Faroe Islands established a 200-mile EEZ on January 1, 1977. They quickly initiated negotiations to maintain access to their former fishing grounds with the EC,[32] Iceland,[33] Norway, the USSR, Canada, and even the United States.[34] The U.S.-Faroe agreement expired on July 1, 1991. Most negotiations are bilateral and include an exchange of species desired by Faroese fishermen (cod, whiting, haddock, and shrimp) for species desired by other fishermen (mostly blue whiting, herring, and sand eel).[35] In recent years, the Faroese, (with the assistance of Denmark), have reached new agreements with Russia, Latvia, Lithuania, and Estonia. The new agreements provides a 1993 quota for blue whiting as follows: Russia (140,000 tons), Latvia (12,000 tons), Lithuania (10,000 tons), and Estonia (6,000 tons). In exchange, the Faroese received quotas for other species including cod, capelin, herring, sprats, Atlantic salmon,[36] and shrimp.[37]

Ten years after most nations extended their EEZs to 200-miles, the Faroese fisheries were still highly dependent upon distant-waters for almost half their catch. The 1992 Faroese fisheries catch included 72,000 tons caught in "middle" waters and 51,000 tons in "distant" waters (table 6). In exchange for 1993 quotas of 222,281 tons of fish in waters of other countries, the Faroese gave quotas of 272,160 tons to other nation's to fish in their waters (table 7). Foreign-flag vessels harvested 160,000 tons in Faroese waters in 1992.[38]

The continued reliance on distant-waters has contributed to the gradual decline in the Faroese catch. This has been especially true for Atlantic cod. Landings of this prized fish have declined from Canada across the North Atlantic to Great Britain with disastrous consequences for Faroese and local fishermen alike. This biological phenomenon has led to some bankruptcies and forced the sale of some fishing vessels.[39] Biological disruptions in distant fishing grounds, overfishing in local waters, and highly subsidized fishing fleets have impacted the Faroese and made it difficult to predict accurately the future of this important fishery.

The Faroe Islands did not join the European Community with Denmark when the Danes joined the EC in 1973. An autonomous trade agreement with the EC was reached in 1974. This agreement was replaced by a bilateral trade agreement in 1992, which permits most Faroese products to enter the EC free of duties. The Faroese parliament has recently decided to remain outside the EC; it is thought that the advantages of full membership would be outweighed by its disadvantages.[40]

7. Fleet Dispersal Plans

Economic difficulties can result in the sale of vessels at any time. Many Faroese fishing vessels have already been sold to foreign buyers.

Economic difficulties may also force fishermen to seek opportunities in distant-waters. In 1990, a Faroese company reached an agreement with Waigunuei Trawlers on the North Island of New Zealand to establish a joint venture operation. The Faroese owner had sent his *Polarborg I* to fish for orange roughy, hoki, and squid. The vessel was scheduled to arrive in New Zealand on August 8, 1990.[41] The *Polarborg I* was built in a Norwegian shipyard as a wet fish/freezer trawler for bottom and pelagic fishing in 1988.[42] Previously a Faroese effort to fish off Namibia was attempted, but the venture failed and the vessels were sold at auction in South Africa in an attempt by banks to recover some of their expenses. These efforts appear isolated.

Faroese fishermen are not expected to seek distant fishing grounds where fishing conditions and species are different from those of the North Atlantic. It is likely, however, that Faroese fishermen will seek to maintain their access to their traditional fishing grounds in the North Atlantic. The Faroese will look to Denmark for assistance in negotiating new annual agreements with the EC and countries such as Greenland, Canada, Iceland, Norway, Russia and the Baltic countries.

SOURCES

Danielsen, Birger. "Bread for the Faroes - fish for the world," *Faroe Isles Review*, Volume 1, No. 1, 1976, p.45.

"Færøernes banker ramt af pengemangel" and "Lavvande i landskassen," *Berlingske Tidende*, August 6, 1993.

Faroese Business Environment, 1990, The Faroese Government, Copenhagen, 1990, p. 29.

Faroese Statistical Bulletin, May 1992, p. 15.

"Fish export decline, inflation cause crisis in Faeroes," *Hufvudstadsbladet*, Helsinki (in Swedish), April 16, 1985, p. 14.

Fishing News International, various issues.

Folsom, William B. "Faroe Islands Fisheries Sector, 1989-90," *International Fisheries Report* (IFR-90/09), National Marine Fisheries Service, NOAA, U.S. Department of Commerce, February 9, 1990.

Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark

Hulgaard, Erling. Danish Ministry of Fisheries, fax dated August 6, 1993

Johanse, Tryggvi. Faroese Government Office, letter to Erling Hulgaard, dated June 3, 1993

Milazzo, Matteo. "The Faroese Fishing Industry," *International Fisheries Report* (IFR-78/42), National Marine Fisheries Service, NOAA, U.S. Department of Commerce, 1978

Palme, Christian. "Hard Times for fishing --- Debts hurting Faeroes," *Dagens Nyheter*, Stockholm, May 28, 1985, p.10.

Scudder, Bernard. "Faroe Islands aim to stay one step ahead," *Seafood International*, September 1991, p. 39

World Fishing, various issues.

Faroe Islands

(part of the Danish realm)

25 km
Svínoy
Streymoy
Bordhoy
Mykines
Vágar
TÓRSHAVN
Norwegian Sea
Sandoy
North Atlantic Ocean
Skúvoy
Sudhuroy

Table 1.--FAROE ISLANDS. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-90.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	8,709	12	1,036	1	-	-	9,745	13
1976	10,285	14	1,036	1	-	-	11,321	15
1977	10,269	14	1,036	1	-	-	11,305	15
1978	11,211	15	1,036	1	-	-	12,247	16
1979	10,303	14	1,036	1	-	-	11,339	15
1980	10,872	15	1,036	1	-	-	11,908	16
1981	10,178	14	4,226	3	-	-	14,404	17
1982	9,440	13	4,226	3	-	-	13,666	16
1983	9,444	13	4,226	3	-	-	13,670	16
1984	10,785	15	5,262	4	3,816	1[a]	19,863	20
1985	10,905	15	6,380	5	6,089	2	23,374	22
1986	12,355	17	6,380	5	6,089	2	24,824	24
1987[b]	10,083	14	12,923	11	4,942	2	27,948	27
1988	11,897	16	14,908	12	2,016	1	28,821	29
1989	11,973	16	13,980	11	2,016	1	27,969	28
1990	10,465	14	12,234	10	2,016	1	24,715	25

Sources: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years (1975-1986). Information in the shaded area is from Tryggvi Johansen, Faroese Government Office, Copenhagen, Denmark in a letter to Erling Hulgaard, June 3, 1993 (1987-1990).

[a] The *Reynsatindur*, a 3,816-GRT vessel, was designed to fish for blue whiting for conversion into surimi. This was part of the effort to move the Faroese fishing industry away from reliance on traditional species. The vessel was built in 1976 by an Italian fishing company that fished for squid off the United States Atlantic coast. The Italians sold the vessel to the Faroese in 1983.

[b] The fleet figures for 1987-90 were provided by Tryggvi Johansen, Faroese Government Office, Copenhagen, Denmark in a letter to Erling Hulgaard dated June 3, 1993. The table is shaded to draw the reader's attention to this detail. All other figures were provided by *Lloyds Register of Shipping Statistical Tables*.

Table 2.--FAROE ISLANDS. Overview of the fishing industry, 1983-92.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	60,000E	60,913	64,357	67,386	71,567	69,378	67,786	60,968	61,719	59,539
Total fishing fleet (Number of vessels)	260E	260E	263	450	456	267	256	233	226	217
High-seas fleet (Number of vessels)	16	20	22	24	27[c]	29	28	25	25E	25E
High-seas fleet (GRT)	13,670	19,863	23,374	24,824	27,948	28,821	27,969	24,715	24,000E	24,000E
Catch (Metric Tons)	329,955	347,352	374,031	352,205	389,505	359,901	303,502	268,095	231,670	250,857
Fishermen (Number)	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Statistics*, Rome, various years (fleet), and *Faroese Statistical Bulletin*, May 1993, p. 11 (The Faroese fishing fleet, 1989-92 and catch, 1989-92).

[c] The *Lloyds Register* includes Faroese fleet statistics under Denmark beginning in 1987. The fleet figures for 1987-90 are provided by Tryggvi Johansen, Faroese Government Office, Copenhagen, Denmark in a letter to Erling Hulgaard dated June 3, 1993.

Table 3.--FAROE ISLANDS.--High-seas fishing fleet, by type and tonnage of vessel, 1987-1990.

Vessel type	1987		1988		1989		1990	
	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage
500-999-GRT:								
Factory stern trawlers	3	2,472	4	3,423	3	2,576	3	2,576
Freezer stern trawler	4	2,944	4	2,944	5	3,867	5	3,867
Wet-fish trawler	2	1,299	4	2,867	4	2,867	3	2,083
Purse seiners	5	3,368	4	2,663	4	2,663	3	1,939
Sub-total	14	10,083	16	11,897	16	11,973	14	10,465
1,000-1,999-GRT								
Factory stern trawlers	4	4,429	5	6,414	5	6,673	5	6,348
Freezer stern trawlers	4	4,714	4	4,714	4	4,714	3	3,645
Purse seiners	3	3,780	3	3,780	2	2,593	1	1,087
Fishing vessels, nei	-	-	-	-	-	-	1	1,154
Sub-total	11	12,923	12	14,908	11	13,980	10	12,234
Over 2,000-GRT								
Factory stern trawlers	1	2,926	-	-	-	-	-	-
Purse seiners	1	2,016	1	2,016	1	2,016	1	2,016
Sub-total	2	4,942	1	2,016	1	2,016	1	2,016
TOTAL FLEET	27	27,948	29	28,821	28	27,969	25	24,715

Source: Tryggvi Johansen, Faroese Government Office, Copenhagen, Denmark in a letter to Erling Hulgaard, June 3, 1993.

Table 4.--FAROE ISLANDS. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.
Coastal[d] (Northeastern Atlantic and Baltic Sea, FAO area 27)	264.0	263.0	369.8	346.9	382.6	348.2	297.4	276.7	233.9
Distant-water (Northwestern Atlantic, FAO area 21)	22.0	12.1	4.2	5.3	6.9	11.7	12.5	10.5	12.2
Total	286.0	275.1	374.0	352.2	389.5	359.9	309.9	287.2	246.1

Source: FAO, *Yearbook of Fishery Statistics*, various years.

[d] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

Table 5.--FAROE ISLANDS. The fishing fleet by type of vessel, 1988-92.

Type	1988		1989		1990		1991		1992	
	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage
	No.	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*
Trawlers:										
High-seas	5	5,385	5	5,385	6	6,803	6	6,803	7	7,650
Wet-fish	84	23,868	84	23,863	74	21,430	70	20,761	70	20,623
Other	27	16,148	27	16,148	23	12,596	24	14,320	23	13,987
Sub-total	116	45,401	116	45,396	103	40,829	100	41,884	100	42,260
Longliners and seiners:										
Wet-fish longliners	26	5,971	26	5,971	26	6,074	25	5,967	24	5,738
Purse-seiners	9	8,100	9	8,100	7	5,869	7	5,869	7	5,869
Freezer longliners	9	2,830	9	2,830	7	2,036	7	2,036	4	1,087
Others	7	730	7	730	8	1,884	8	1,884	7	730
Sub-total	51	17,631	51	17,631	48	15,863	47	15,756	42	13,424
TOTAL:	167	63,032	167	63,027	151	56,692	147	57,640	142	55,684

Source: Faroese Statistical Bulletin, May 1993, p. 11 and May 1992, p.13.

Table 6.--FAROE ISLANDS. Catch by Faroese vessels, by fishing ground, 1989-92.

Fishing ground	1989	1990	1991	1992
	Metric tons, live weight			
Faroese waters:				
Coastal waters	144,438	154,226	145,666	128,255
Sub-total	144,438	154,226	145,666	128,255
Middle fishing grounds:				
Iceland	18,550	28,980	9,036	16,191
East Greenland and Jan Mayen	8,182	887	1,126	9,538
Denmark Strait, Hatton Bank, and Rockall	47	4	19	4,746
Baltic Sea	4,499	3,558	2,992	602
North Sea, west of the British Isles, and the Skagerak	87,895	44,622	19,345	24,511
Norwegian waters	6,943	11,297	12,534	16,449
Sub-total	126,116	89,348	45,052	72,037
Distant fishing grounds:				
Canada and Flemish Cap	1,761	5,782	6,476	3,543
West Greenland	480	233	247	319
Barents Sea:				
Northern Norway	4,245	2,704	3,586	11,034
Gray zone	3,086	4,712	6,004	5,105
Russian zone	9,625	2,707	16,369	22,893
Svalbard	4,251	5,891	6,020	5,359
Other	9,500	2,492	2,250	2,312
Sub-total	32,948	24,521	40,952	50,565
TOTAL CATCH	303,502	268,095	231,670	250,857

Source: Faroese Statistical Bulletin, May 1993, p. 15.

Table 7.--FAROE ISLANDS. Faroese quotas in foreign waters and foreign quotas in Faroese waters, by country, 1992-1993.

Country	Faorese quotas in foreign waters		Foreign quotas in Faroese waters	
	1992	1993	1992	1993
	Metric tons			
Russia	36,696	30,300	122,200	142,200
Norway	59,145	57,750	58,700	55,900
Iceland	6,500	6,000	-	-
Canada	800	800	-	-
EEC	110,735	111,305	45,660	46,060
Estonia	720	1,925	6,000	6,000
Latvia	1,520	4,630	12,000	12,000
Lithuania	760	5,395	6,000	10,000
Other, nes	3,886	4,176	-	-
TOTAL	220,762	222,281	250,560	272,160

Source: Faroese Statistical Bulletin, May 1993, p. 12-13.

Table 8.--FAROE ISLANDS. Faroese quotas in foreign waters and foreign quotas in Faroese waters, by species, 1992-1993.

Species	Faorese quotas in foreign waters		Foreign quotas in Faroese waters	
	1992	1993	1992	1993
	Metric tons			
Cod and haddock	17,001	22,330	500	500
Other demersal species	16,941	15,841	21,360	20,560
Mackerel	13,360	13,930	22,300	23,700
Herring	3,160	7,060	0	0
Capelin	45,000	27,000	0	0
Sprat and horse mackerel	9,000	19,800	0	5,000
Norway pout, sandeels, etc.	38,000	38,000	5,000	0
Blue whiting	72,000	72,000	197,000	220,000
Shrimp	4,150	4,150	0	0
Other species	2,150	2,170	2,400	2,400
TOTAL	220,762	222,281	248,560	272,160

Source: Faroese Statistical Bulletin, May 1993, p. 12-13.

ENDNOTES

1. *Faroese Statistical Bulletin,* May 1992, p. 15.

2. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark, fax dated August 10, 1993.

3. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark, fax dated August 10, 1993.

4. Bernard Scudder, "Faroe Islands aim to stay one step ahead," *Seafood International*, September 1991, p. 39 and Birgir Danielsen, "Bread for the Faroes - fish for the world," *Faroe Isles Review*, Volume 1, No. 1, 1976, p.45.

5. Birgir Danielsen, "Bread for the Faroes - fish for the world," *Faroe Isles Review,* Volume 1, No. 1, 1976, p. 45.

6. *Faroese Business Environment, 1990,* The Faroese Government, Copenhagen, 1990, p. 29.

7. Christian Palme, "Hard Times for fishing --- Debts hurting Faeroes," *Dagens Nyheter*, Stockholm, May 28, 1985, p.10. and "3,800-ton Italian trawler refits for blue whiting," *Fishing News International,* June 1983.

8. "Fish export decline, inflation cause crisis in Faeroes," *Hufvudstadsbladet*, Helsinki (in Swedish), April 16, 1985, p. 14.

9. "Faroes see future in new trawlers," *Fishing News International*, March 1986, p. 53.

10. Faroe Islands, *World Fishing*, October 1988, p. 46. This is above the author's estimate of 26 vessels, but is probably accurate.

11. These vessels can be quite large. The *Faroe Prawns*, built by Norway's Langsten Slip for P/F Chlamys of Tvoroyri in the Faroe Islands registered 2,015-GRT. The vessels was delivered in January 1987. "Another ship from Norway for Faroe prawn fleet," *Fishing News International*, March 1987, p.27.

12. The *Lloyds Register*, unfortunately, listed the Faroese fishing fleet together with the Danish fishing fleet beginning in 1987.

13. *Faroese Statistical Bulletin*, May 1993, p. 15.

14. *Faroese Statistical Bulletin*, May 1993, p. 39.

15. *Faroese Statistical Bulletin,* May 1993, p. 16.

16. *Faroese Statistical Bulletin*, May 1993, p. 39.

17. "Two more for Faroe," *Fishing News International,* July 1988.

18. *Faroese Business Environment, 1990,* The Faroese Government, Copenhagen, 1990, p. 33.

19. William B. Folsom, "Faroe Islands Fisheries Sector, 1989-90," *International Fisheries Report* (IFR-90/09), National Marine Fisheries Service, NOAA, U.S. Department of Commerce, February 9, 1990. The situation in the Faroe Islands continues to face serious problems. Erling Hulgaard, Danish Ministry of Fisheries, fax dated August 6, 1993 and "Færøernes banker ramt af pengemangel" and "Lavvande i landskassen," *Berlingske Tidende*, August 6, 1993.

20. Tryggvi Johanse, Faroese Government Office, letter to Erling Hulgaard, dated June 3, 1993. This was in response to a draft of the report sent to Mr. Hulgaard by the authors.

21. *Faroese Business Environment, 1990,* The Faroese Government, Copenhagen, 1990, p. 60.

22. *Faroese Business Environment, 1990,* The Faroese Government, Copenhagen, 1990, p. 60.

23. The U.S. Embassy in Copenhagen reports that subsidies include operational support, guarantees, and preferential loans. No monetary values are provided for these subsidies, but they are probably as large as Government price and income supports which amounted to $84 million in 1989 and $38 million in 1992. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark, fax dated August 10, 1993.

24. *Fishing News International*, April 1993, p. 42. It was later reported that Canadian-origin vessels, back by Faroese capital, and registered in Belize, the Dominican Republic, and St. Vincent, were fishing in the so-called "Loophole" between the Norwegian EEZ and the Russian EEZ in the Barents Sea. "Norway acts on fishing in Barents Sea "Loophole." U.S. Embassy, Oslo, August 18, 1993. The authors have no information linking the meetings in early 1993 with the alleged involvement off Norway in mid-1993.

25. Ian Strutt, "Faroe starts major scrapping scheme," *Fishing News International*, June 1989, p. 58. Strutt reported: "A political decision has been taken in the Faroe Islands to reduce the fleet by 30 percent."

26. William B. Folsom, "Faroe Islands Fisheries Sector, 1989-90," *International Fisheries Report* (IFR-90/09), National Marine Fisheries Service, NOAA, U.S. Department of Commerce, February 9, 1990.

27. "Faroes Start Major Scrapping Scheme," *Fishing News International*, June 1989, p. 58.

28. "Faroe Fleet Auctioned in Cape Town," *Fishing News International*, April 1993, p. 42.

29. "Faroese clings on to newer ships - despite fleet auction," *Fishing News International,* July 1993, p. 42.

30. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark, fax dated August 10, 1993.

31. "Big vessels sell-off gathers pace," *Fishing News International,* August 1990, p.56.

32. The Faroe-EC fisheries agreement was negotiated in 1974 and ran through 1991, when it was renegotiated. Under the agreement the Faroes can export fishery products to Denmark duty free. Similar exports to the UK and Ireland are permitted at a reduced quota.

33. On April 17, 1991, the Governments of Iceland and the Faroe Islands agreed that the Faroese would end their open sea salmon quota for 3 years, beginning in 1991. Iceland gave the Faroese an increased allocation of halibut as part of their program to protect wild Atlantic salmon. U.S. Embassy, Copenhagen, April 25, 1991.

34. Matteo Milazzo, "The Faroese Fishing Industry," *International Fisheries Report* (IFR-78/42), National Marine Fisheries Service, NOAA, U.S. Department of Commerce, 1978 provides a comprehensive look at the various international fishery agreements negotiated by the Faroe Islands in 1977-78.

35. Bernard Scudder, "Faroe Islands aim to stay one step ahead," *Seafood International*, September 1991, p. 43.

36. These are probably salmon that have been released into the Baltic by Swedish, Finnish, or other countries as part of salmon enhancement programs.

37. *Faroese Statistical Bulletin*, May 1993, p. 11.

38. *Faroese Business Environment, 1990,* The Faroese Government, Copenhagen, 1990, p. 110 and Tryggvi Johansen, Faroese Government Office, Copenhagen, Denmark in a letter to Erling Hulgaard dated June 3, 1993.

39. William B. Folsom, "Faroe Islands Fisheries Sector, 1989-90," *International Fisheries Report* (IFR-90/09), National Marine Fisheries Service, NOAA, U.S. Department of Commerce, February 9, 1990.

40. Tryggvi Johansen, Faroese Government Office in a letter to Erling Hulgaard, dated June 3, 1993.

41. "Big ship sell-off gathers pace," *Fishing News International*, August 1990, p.56.

42. "Versatile trawlers delivered to Faroes..." *World Fishing*, July 1988, p. 23.

3.3

FINLAND

Finland's only high-seas vessel was sold in 1981 and has never been replaced. Finland is not expected to play a role in high-seas fisheries in the next few years.

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1. General Background

Commercial fishing is not a major economic activity in Finland and the fishing industry appears to be declining in importance. The fisheries catch declined in the past decade as has the size of the fishing fleet and the number of fishermen. Finland imported 31,000 tons of fish in 1991 and 1992 and exported nearly 2,000 tons in both years. An overview of the Finnish fishing industry can be seen in tables 1-3.

2. Fleet Background

The Finnish fishing fleet has remained unchanged at about 500 registered vessels during the past 10 years.[1] The fleet includes about 100 herring vessels and approximately 400 vessels used for fishing Atlantic salmon (*Salmo salar*) or other species.[2] Most of the commercial fishing takes place in the Baltic Sea where growing pollution, increased competition, and declining stocks have made fishing less attractive in the past few decades. Much of the Atlantic herring (*Clupea harengus*) catch is used as mink feed or increasingly as protein feed for rainbow and brown trout in hatcheries.[3]

3. Modernization programs

The Finnish Ministry of Agriculture and Forestry administers a rebate program for the construction of new fishing vessels. The program originated in the 1950's and the last revisions to the law were made in 1976. The Government provides an interest subsidy for loans raised by fishermen in private banks for an eight-year period. The interest on the loans is linked to the base rate.[4] Fishermen pay 5-percent interest while the Government rebates the remaining part of the base rate and an addition of one percentage point. At the 1993 base rate level of 6-percent, the Government's contribution is 1-percent plus 1-percent. The rebate program has decreased over the years. At the end of the 1980's, loans worth approximately $3.5 million were authorized; the value of these loans declined to about $2.2 million in 1992 and will be $0.8 million in 1993. Should Finland join the EC, the system of providing interest subsidies for construction of new fishing vessels in Finland may end. There are few subsidy programs for modernizing the fishing fleet, except for the rebate program.[5]

4. Decommissioning Programs

The authors are not aware of any decommissioning programs.

5. Shipyards

There are 3 main shipyards in Finland: Hollming, Rauma-Repola, and Warsila. The Holming company built the scientific research vessel, *Akademik Mstislav Keldysh*, a 5,500-GRT, in early 1983, for the USSR Academy of Sciences. The shipyard also built a series of 3 scientific research vessels in the 2,600-GRT range for the USSR in 1983 as well.[6] The Holming shipyard is still operational.

Rauma-Repola won major orders from the Soviet Union in the mid-1980s and became very dependent upon the USSR for its operations. The company built 3 floating fish factories for the Soviet Union.[7] Rauma-Repola also built the Antarctic research ship, the *Akademik Fedorov*, for the USSR in hopes of winning future orders. The problem of dealing with special bilateral agreements with the Soviet Union (involving barter arrangements) complicated the arrangement of building vessels for the USSR.[8] Rauma Repola merged with United Paper Mills in 1990 and shortened its name simply to Repola.

In 1986, the Wartsila shipyard merged with a part of the state-owned Valmet shipbuilding facility; after various financial and structural rearrangements, the resulting company emerged as Masa Yards. In 1990, the Norwegian conglomerate, Kvaerner A/S purchased 10-percent of the shares of Masa. The Norwegian firm next purchased the Finnish Government's shares (27-percent) and those of the other owners in 1991.[9]

Finnish shipyards are reportedly doing very well, with more orders now than they have had in the past 10 years. Most of this work involves building liquid natural gas (LGN) vessels, cruise ships, or other specialty vessels.[10]

6. International Agreements

Finland is located between Russia to the east, Estonia and Lithuania in the south, Sweden to the west, and Norway to the north. Countries located around the Baltic Sea have negotiated fishery agreements with their neighbors over the course of many years.

Finland, as a member of the Baltic Sea Fishery Commission (BSFC), receives modest catch quota for cod, herring, sprat, and Atlantic salmon. Sea trout are not subject to quotas since they can be artificially raised for release into the sea. Each BSFC country, after receiving its annual catch quota, can exchange these quotas on a bilateral basis with other member countries.

Finland, under the BSFC regime, negotiated agreements with **Estonia** and **Lithuania** allowing fishermen from those two countries to catch Atlantic salmon and herring in Finnish waters in the Gulf of Finland and in the northern part of the Baltic Sea. In exchange, Estonia and Lithuania have given Finnnish fishermen permission to fish for herring in their fishing zones.

Finland negotiated a similar agreement with **Sweden** covering the northern Baltic Sea and the Gulf of Bothnia. The two countries have agreed that Atlantic herring, salmon, and cod can be caught by each countries' fishermen on an equal basis in their respective fishing zones. The agreement does not include European sprat (*Sprattus sprattus*) which spends most of its life in the southern part of the Baltic Sea. Finnish fishermen prefer catching herring in the Swedish zone while Swedish fishermen prefer catching cod in Finnish waters. The quotas and respective bilateral fishing agreements are valid for one year at a time.

After the Baltic states became independent, the borders changed in such a way that the Russian fishing zone in the Baltic Sea diminished. Finland and **Russia** have not negotiated a new bilateral fishery agreement. However, an existing fishery agreement covering historic areas between the two countries remains effective. The agreement allows Finland to lease some old fishing grounds near Kotka where Finnish fishermen traditionally fished before World War II.

7. Fleet Dispersal Plans

Finland currently does not operate a high-seas fleet. The outlook for the fleet of coastal fishing vessels is not good; the fleet has steadily declined over the past few years and this trend is expected to continue.

SOURCES

"Finnish yard to build three giant Soviet factory vessels," *World Fishing*, October 1986.

Review of Fisheries, 1988. Organization for Economic Co-Operation and Development, Committee for Fisheries, Paris, 1989.

U.S. Embassy, Helsinki, various reports.

Finland

300 km
Ivalo
Rovaniemi
Oulu
Gulf of Bothnia
Vaasa
Kuopio
Joensuu
Tampere
Aland Islands
Turku
Kotka
HELSINKI

Table 1.--FINLAND. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	581	1	1,299	1	-	-	1,880	2
1976	581	1	-	-	-	-	581	1
1977	581	1	-	-	-	-	581	1
1978	581	1	-	-	-	-	581	1
1979	581	1	-	-	-	-	581	1
1980	581	1	-	-	-	-	581	1
1981	581	1	-	-	-	-	581	1
1982	-	-	-	-	-	-	0	0
1983	-	-	-	-	-	-	0	0
1984	-	-	-	-	-	-	0	0
1985	-	-	-	-	-	-	0	0
1986	-	-	-	-	-	-	0	0
1987	-	-	-	-	-	-	0	0
1988	-	-	-	-	-	-	0	0
1989	-	-	-	-	-	-	0	0
1990	-	-	-	-	-	-	0	0
1991	-	-	-	-	-	-	0	0
1992	-	-	-	-	-	-	0	0

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Table 2.-- FINLAND. Overview of the fishing industry, 1983-92.

Fisheries sector		1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
		Number of vessels and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)		10,866	10,001	9,385	9,370	9,559	9,348	8,163	8,000E	8,000E	8,000E
Herring vessels		211	194	166	165	158	163	136	100E	100E	100E
Other vessels		400E	400E	400E	400E	400E	400E	400E	400E	400E	400E
Total fishing fleet		611	594	566	565	558	563	536	500	500	500
High-seas fleet (Number of vessels)		0	0	0	0	0	0	0	0	0	0
High-seas fleet (GRT)		0	0	0	0	0	0	0	0	0	0
Catch (metric tons)	FAO data	130,346	134,346	135,157	131,076	106,076	120,900	110,463	97,391	82,813	79,100
	Finnish data	92,338	96,032	96,074	91,018	88,923	99,999	87,619	73,709	60,248	60,000E
Fishermen (Number of full- and part-time)		4,499	4,735	6,994	6,950	6,900	5,821	5,396	5,000E	2,815	2,700

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years and Finnish catch statistics provided by Stephanie Miley, Economic Office, U.S. Embassy, Helsinki, Finland fax message, July 23, 1993 (for catch data). *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years, Yleisradio, Helsinki, July 7, 1993 and fleet statistics provided by Stephanie Miley, Economic Office, U.S. Embassy, Helsinki, Finland fax message, July 23, 1993

Table 3.--FINLAND. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	23.0	32.4	32.4	33.0[a]	9.0	8.2	9.4	9.7	7.4
Coastal[b] (Northeastern Atlantic and Baltic Sea, FAO area 27)	87.1	111.0	103.0	98.2	98.0	113.0	101.1	87.7	75.4
Total	110.1	143.4	135.4	131.2	107.0	121.2	110.5	97.4	82.8

Source: FAO, *Yearbook of Fishery Statistics*, various years.

[a] The Finnish Game and Fishery Research Institute (Riista- ja kalatalouden tutkimuslaitos) questioned the FAO catch statistics for inland waters. The Insitute provided catch statistics that reflect landings of about 5,000 tons for the years 1980 to 1986, followed by a gradual decline to 3,300 tons in 1990. Inland catch statistics for Finland were provided by Stephanie Miley, Economic Office, U.S. Embassy, Helsinki, Finland fax message, July 23, 1993. See table 2 for additional discrepancies between Finnish statistics and FAO statistics.

[b] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

ENDNOTES

1. Stephanie Miley, Economic Office, U.S. Embassy, Helsinki, Finland fax message, July 23, 1993.

2. Stephanie Miley, Economic Office, U.S. Embassy, Helsinki, Finland fax message, July 23, 1993. The Atlantic salmon, in this instance, probably are raised by Finnish authorities and released into the wild to maintain stocks of Atlantic salmon.

3. The U.S. Embassy reported that mink breeding has diminished considerably during the past few years. Stephanie Miley, Economic Office, U.S. Embassy, Helsinki, Finland fax message, July 23, 1993. The FAO reports that Finland produced 18,000 tons of rainbow trout (*Oncorhynchus mykiss*). The U.S. Embassy reports that brown trout (*Salmo trutta*) is frequently grown in pens or are released into the wild as a means of supplementing declining catches.

4. The base rate is an administrative reference rate determined by the Central Bank and the Parliamentary Supervisory Board, which applies to some domestic mortgages and consumer loans. Stephanie Miley, Economic Office, U.S. Embassy, Helsinki, Finland fax message, July 23, 1993.

5. *Review of Fisheries, 1988*. Organization for Economic Co-Operation and Development, Committee for Fisheries, Paris, 1989.

6. Brochures published by the Hollming Ltd. Shipyards which were received by the National Marine Fisheries Service in December 1983.

7. "Finnish yard to build three giant Soviet factory vessels," *World Fishing*, October 1986, p. 12.

8. U.S. Embassy, Helsinki, April 27, 1988.

9. Stephanie Miley, Economic Office, U.S. Embassy, Helsinki, Finland fax message, July 23, 1993.

10. Stephanie Miley, Economic Office, U.S. Embassy, Helsinki, Finland fax message, July 23, 1993.

3.4

GREENLAND

Greenland has a small, but modern fishing fleet. Large, steel vessels are needed to operate safely in icy Arctic waters where fishing conditions are often harsh. Greenland's fisheries are overcapitalized and the Government is encouraging Greenland fishermen to sell their vessels and get out of fishing; this is especially true for Greenland's shrimp fishery. Thus, some Greenlandic vessels may be sold in the next few years. Because these vessels are built for cold-water operation, it is likely that they will be sold only to firms operating in extreme northern or southern climates.

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1. General Background

Greenland (Kalaallit Nunaat or "Land of Man") is the world's largest island. Almost 84 percent of the country is covered with a thick mantle of polar ice. Small, isolated coastal villages are scattered along the nation's fjords and rocky shoreline. Fishing and hunting are important sources of food and income for many Eskimo (Inuit) inhabitants. Greenland is fortunate to have access to large quantities of deepwater shrimp, an important source of revenue to this country. Fishing for wild salmon is limited to native fishermen and is a source of traditional food. Fishermen do, however, deliver wild salmon to the Greenland Government-owned *Royal Greenland*, the nation's largest seafood processing firm, which exports its products throughout the world.

Greenland is the largest island in the world, stretching 2,670 kilometers (km) from north to south and 1,050 km from east to west. Geographically the island is part of the North American continent, but the island's inhabitants look to Denmark for administrative and economic support, trade, cultural ties, military protection and diplomatic representation. The current Home Rule system was introduced under Danish Act No. 577 of November 29, 1978, and gave Greenland the status of a distinct community within the Kingdom of Denmark. The island has a total mass of 2.2 million square kilometers (km^2), which includes 1.8 million km^2 of polar ice nearly 3 km deep in some places. A lack of arable land and Greenland's harsh Arctic climate (where temperatures have been recorded as cold as minus 70° C) make agriculture difficult, if not impossible. The nation is sparsely populated, with only 55,500 inhabitants living in 133 settlements. Most of these settlements are located along the southern and western coasts of Greenland. Few roads connect these remote villages, which can be isolated for months during winter. The largest town is the capital, Nuuk/Godthaab, which has a population of about 12,000. Maintenance of a social welfare system similar to Denmark's has given the public sector a dominant role in the economy and has contributed to severe economic dislocation in recent years. With limited resources (there is potential for platinum and gold mining, but zinc and lead mines have recently closed) there are not many alternatives available to the Home Rule Government. Tourism, however, is a resource that the Home Rule Government hopes to expand in the future.[1] Greenland is fortunate to have a 39,100 km. coastline and access to a continental shelf of nearly 500,000 km^2. Fishing is Greenland's most important industry, accounting for over 95 percent of export income and about 25 percent of total income. The fishing industry directly employs 3,000 people. Another 10,000 to 12,000 people -- one quarter of the population -- are partly dependent upon fishing for their livelihood.

Greenland was administratively controlled by Denmark from 1774 to 1978, when Home Rule was introduced. Fishing is regulated by the Home Rule Executive (*Landsstyre*). Greenlandic officials set the Total Allowable Catch (TAC) according to recommendations of the North Atlantic Fisheries Organization (NAFO), the North Atlantic Salmon Conservation Organization (NASCO), and the International Council for the Exploration of the Seas (ICES). Fishing quotas are allocated to fishermen registered to fish in Greenland's waters. Vessels over 80-GRT need a license to fish in Greenland's Exclusive Economic Zone (EEZ). These vessels are regulated by individual vessel quotas specifying which species they are allowed to fish. Special rules apply to shrimp and salmon fisheries. The *Landsting* (Greenland Assembly) grants fishing licenses to foreign vessels fishing certain species and quantities, either in accordance with international agreements or by special agreement with the Landsstyre. Normally, 10 percent of the catch must be landed in Greenlandic ports for processing. The production of sea-cooked shrimp for direct export, however, is permitted. There is a tax on shrimp caught in Greenlandic waters but not landed for processing. In 1987, the shrimp tax raised about $10 million. Revenues were expected to increase to about $12 million in 1988. Starting as a unit tax per kilogram, the shrimp tax in 1991 was changed to an *ad valorem* tax of 11-percent. Effective July 1, 1992, the shrimp tax was reduced to one-percent. Trawlers producing sea-cooked shrimp for export require a license and export permit from Home Rule authorities. In 1990, the Landsting adopted a Fisheries Act permitting trade of shrimp fishing quotas. The Act was designed to increase flexibility in the industry and reduce catch capacity.

Fishermen in Greenland landed slightly less than 101,200 tons of all species during 1992 compared with 113,600 tons in 1991. Northern deepwater shrimp (*Pandalus borealis*) and Atlantic cod (*Gadus morhua*) were important species in 1992, accounting for 71,300 tons and 10,400 tons respectively. Shrimp is a high-value product that has grown in both quantity and value since 1980, when only 36,000 tons were landed. Greenland's cod population, however, is weak and catches are expected to decline in the next few years. Fishermen also harvested Greenland halibut (14,000 tons), and Greenland cod (1,700 tons). Harvests of redfish, salmon, wolffish, grenadier, capelin and other species were under 500 tons during 1992. Greenland's cod stocks have fluctuated dramatically during the past 60 years. Thanks to generally warm oceanic conditions, the stock of cod off the coast was abundant, yielding catches exceeding 300,000 tons annually. Catches of Atlantic cod in Greenland peaked at nearly 450,000 tons in 1964. Over-fishing, changes in sea temperatures, and poor recruitment have since led to significant decreases in the size of the Greenland cod population and resulted in lower landings. The total Atlantic cod catch was 89,900 tons in 1990, of which

Greenlandic vessels caught 54,900 tons. Landings declined to 42,500 tons in 1991 (26,900 tons by Greenlanders) and then to 20,300 tons in 1992 (10,400 tons by Greenlanders). Scientific studies conducted by the Greenland Fisheries Research Institute reveal that the stocks of cod found off Greenland have not recovered from the serious declines of the 1960s. Since the 1960s, poor recruitment has been the rule, rather than the exception. Only the 1973 and 1984 year-classes were of any significance. The population has since shifted towards the southern coasts of Greenland. The outlook for recovery of Greenland's cod fishery does not appear good and an annual catch of 10-20,000 tons is the best that can be projected by fishery biologists for the foreseeable future. Greenland's shrimp fishery began in the late 1950s and early 1960s following the failure of the cod fishery; poor landings of cod forced fishermen to seek alternative species. Fortunately, Greenland had huge offshore resources of small, coldwater shrimp. The harvest of these shrimp has grown substantially. Greenland's shrimp landings were 71,300 tons in 1992. The strong increase in landings have decreased deepwater shrimp prices. Lower shrimp prices and rising operating costs hurt some of Greenland's shrimp fishermen.

2. Fleet Background

There were 462 fishing vessels registered in 1990, including 39 large trawlers over 500-GRT. Most of Greenland's fishing fleet (80 vessels) sails out of the port at Nuuk, which includes 19 trawlers over 500-GRT[2] (Table 1 and 2).

***Lloyd's Register* includes Greenland's fishing fleet statistics under Denmark. This, unfortunately, causes problems in compiling statistical information. The authors have not included information about Greenland's high-seas fleet in its statistical presentations. Tables 1 and 2 provides information on Greenland's fishing fleet.**

3. Modernization Programs

The Royal Greenland Trade Department began investigating the use of large stern trawlers in 1964.[3] Greenland's first trawler, the *Nuk* arrived in May 1969. The *Nuk* was built in the Ankerlokken Verft yard as a 50-meter long wet fish trawler.[4] Negotiations for the purchase of 2 additional trawlers were initiated and the vessels were expected to arrive in 1971.[5] Royal Greenland began fishing for deepwater shrimp with an 800-GRT vessel (unnamed) in 1973.[6] By 1978, Greenland had 6 vessels (4,329-GRT) in operation and this increased to 8 vessels (6,067-GRT) in 1981.[7] The trawler *Siku* (1,650-GRT) arrived following a refit in Danish shipyards in 1983; the vessel, the former British trawler *Junella* was expected to fish for cod. Other additions to Greenland's fleet was the *Auveq* (the former Danish trawler *Helen Basse*) and the *Thor Trawl* (2,557-GRT former West German trawler *Tubingen*).[8] In 1984, the *Nokasa* underwent a modernization process in a Danish shipyard (11 meters were added to the length of the ship) and the ship returned to Greenland to resume shrimping.[9] In 1985, the *Tasiilaq* (1,376-GRT) was delivered to Greenland by the Orskov Christensens shipyards in Denmark. This reportedly was the 15th trawler built for Greenland by that shipyard.[10] The *Vilhelm Egede* (1,100-GRT), the *M. Rakel* (1,100-GRT) and the *Quipoqqaq* (1,700-GRT) were all delivered to Polar Seafoods of Nuuk in 1985.[11] In 1986, the Greenland Government announced that it would invest $26.6 million in buying new and used trawlers and factory vessels to fish redfish, halibut, cod, and capelin as part of the nation's fleet modernization program.[12] The *Nanoq Trawl* (2,340-GRT) was one of the latest vessels built for Greenland. The ship, built in a Norwegian shipyard, was delivered in 1989 and was designed to fish for shrimp.[13]

4. Decommissioning Programs

The Government of Greenland was modernizing and expanding its fleet up to 1990, when cod landings declined from 87,000 tons in 1989 to 56,000 tons in 1990. The loss of this high valued species impacted the industry. The northern shrimp fishery was also in difficulty, although the catch increased from 65,000 tons in 1989 to 73,000 tons in 1990. Despite the increase, the competition was so great that profitability was beginning to decline. The Greenland Home Rule Authority granted loans to companies willing to withdraw their vessels from the shrimp fleet in an effort to make the fishery more profitable. In 1990, Royal Greenland sold 3 of its trawlers as part of a restructuring program designed to cut losses. The sale of these 3 vessels, plus the loss of the *Carl Egede*, which caught fire while docked in the Svenborg shipyard in Denmark, reduced Royal Greenland's fleet to 12 stern trawlers.[14] Greenland's fishing industry in 1991-93 continued selling its fishing fleet. The *Polar Princess*, a large cod and shrimp trawler, owned by Polar Scallops and financed by Norway's Christiana Bank, was sold to Royal Greenland in December 1991. Royal Greenland also purchased the *Ango* and *Abel Egede* and sold two vessels, the *Manitsoq* and *Sisimiut* in 1991. The 76-meter-long *Simiutaq*, built in 1973 for Norwegian owners (formerly named *Atlantic*), was also for sale. The vessel joined the Greenland fleet in 1986 and was operated by Royal Greenland as a cod vessel until it was reportedly sold to another Greenland company. Another vessel owned by Royal Greenland, the *Sisimiut,* has been sold to Chile. Other trawlers for sale in recent months include Ice Trawl Greenland's 46 m *Qasiaqiaq* and *Qoornqoq*. These are all very large, well-equipped vessels and the sales suggest economic difficulties within the fishing industry.

According to a fleet reduction plan approved by the *Landsting* (Greenland Assembly) in early 1993, the trawler fleet should be reduced to 21 vessels by the end of 1993, of which one-third will be owned by Royal Greenland. The Home Rule Government has set aside $15 million to finance withdrawal of vessels from fishing, and to promote distant water fishing by Greenlandic vessels.[15]

5. Shipyards

Greenland Shipyards consists of 6 yards at Qaqortoq, Paamiut, Nuuk, Maniitsoq, Sisimiut, and Aasiaat. The shipyards are equipped to offer maintenance and repair services to the fleet. The shipyards can repair and maintain vessels built of steel, wood, and glass-reinforced polyester.[16] There is no information available as to construction of new vessels in Greenland's shipyards.

6. International Agreements

For many years Greenland was administratively controlled by Denmark. From 1774 to 1985, the Royal Greenland Trade Department controlled many facets of Greenland's economy, including fisheries. In 1979, the population of Greenland passed a referendum introducing Home Rule. Greenland established a 200-mile EEZ in 1977, subjecting foreign fishing in Greenland's waters to international agreement. Greenland currently permits fishing by member states of the European Community (EC), Iceland, Norway, Russia, and Japan. Greenland has "special relations" status in the EC because it is a self-governing administrative area of Denmark. The 1992 quota for all countries in Greenland's waters amounted to 167,545 tons (141,445 tons on the eastern coast of Greenland and 26,100 tons off western Greenland) and 167,395 tons of fish and shellfish in 1993.[17]

European Community: Greenland initially joined the EC following Home Rule. In 1982, however, Greenland voted to withdraw from the EC, effective February 1, 1985. Because of its relationship with Denmark, however, Greenland kept the status of an overseas territory associated with the Community. In view of Greenland's special relationship, and as spelled out in the protocol to the Treaty Amendment on Greenland's withdrawal from the EC, fishery products were granted access to the Community without tariff and quantitative restrictions. In exchange, Greenland grants EC vessels fishing licenses (within the framework of the EC-Greenland fisheries agreement). This agreement was reached in 1985 and remained in force until December 31, 1989, when it was renegotiated. The EC must, however, pay Greenland fishing fees, which were $37 million in 1989 and $46 million in 1990 and 1991. Payments are expected to decline slightly in 1992 and 1993. These fees have nothing to do with the actual catch but represent a fee paid for the right to fish in Greenland's waters.[18]

EC fishing quotas in Greenland's EEZ totaled slightly over 167,400 tons in 1990 and 155,000 tons of fish and shellfish in 1991. The quotas were divided as follows: Germany (110,300 tons), UK (96,900 tons), France (4,260 tons), and Denmark (3,930 tons). Quota allocation by species included: redfish (52,320 tons), cod (34,000 tons), blue whiting (30,000 tons), capelin (30,000 tons), Greenland halibut (5,200 tons), marine catfish (2,000 tons), and deepwater-shrimp (2,850 tons). More than 80 percent of the quota was allocated to waters off eastern Greenland and the remaining 20 percent from waters off western Greenland. Catches are smaller than quotas.[19]

Norway: The Governments of Norway and Greenland reached an agreement on fishing rights for cod in late 1991. The agreement gives Greenland a TAC for cod in the North Sea and Barents Sea in exchange for Norwegian fishing in Greenland's 200-mile exclusive economic zone. The agreement was arbitrated by Denmark.

Russia: The Governments of Greenland and the Soviet Union were very near an agreement allowing the USSR access to redfish and halibut in waters off southern Greenland in exchange for Barents Sea cod and shrimp quotas. Royal Greenland A/S, Greenland's fish trading company, reached a fishing agreement with the Soviet Arkangelsk Trawler Fleet Co. during July 1991. The agreement provided for Arkangelsk to fish 21,000 tons of Royal Greenland's fish quotas from August to December 1991. All fish were landed and processed in Greenland. The talks broke off in January 1991 in protest against the Soviet crackdown in Lithuania. On March 7, 1992, after the dissolution of the Soviet Union, a five-year fisheries agreement was signed by Denmark, Greenland, and Russia covering the framework and principles for reciprocal fishing in Greenland and Russian waters.[20]

Japan: Representatives of the Japan Deep Sea Trawlers Association and Royal Greenland have established cooperative agreements allowing Japanese fishermen to fish in Greenland's waters. In 1990, the quota was set as follows: redfish (7,000 tons), turbot (500 tons), and other species (500 tons). The fee (reportedly $1.8 million) was payable in 3 installments. Each Japanese trawler was required to carry a Greenland enforcement officer at the expense of the trawler. Japanese fishermen have operated in Greenland's waters since 1985 except in 1989 when negotiations were not concluded). The Japanese fishing quota is expected to be gradually reduced over the next 3 years as part of a long-term program to reduce foreign fishing. In 1988, Japan received a quota of 23,200 tons (including amounts for redfish, turbot, Atlantic herring, capelin, whiting, and squid). While there was no commercial fishing in 1989, the Japanese Marine Fishery Resource Research Center sent the trawler *Shinkai Maru* to conduct exploratory fishing in Greenland's waters. The vessel reportedly caught 1,989 tons during the exploratory fishing cruise.

International organizations: Greenland participates in several international fishery organizations, including the North Atlantic Salmon Conservation Organization (NASCO), the Northwest Atlantic Fisheries Organization (NAFO), the North-East Atlantic Fisheries Commission, (NEAFC), and the International Whaling Commission (IWC).

7. Fleet Dispersal Plans

Most of Greenland's large vessels are owned by Royal Greenland, which has already trimmed the size of its fleet. Whether additional sales will take place is unknown. It should be noted that most of Greenland's fleet of large shrimp trawlers are designed for work in Arctic waters; these vessels can only work effectively in cold waters and buyers for these vessels are likely to come from countries where fishing conditions are harsh. These vessels, for example, are unlikely to be sold to African, Asian, or South American countries with only a few exceptions; Argentina and Chile might be able to use these vessels in their cold-water fisheries.

SOURCES

Eurofish Report, various issues.

Fishing News International, various issues.

Greenland, *Lalaallit Nunaat, 1990,* Statistical Yearbook, pp. 21-22.

Hansen, Søren. Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark, fax dated August 10, 1993

Hjul, Peter (Editor), *The Stern Trawler*, Fishing News (Books) Ltd., London, England, 1972, p. 216.

Hulgaard, Erling. Danish Ministry of Fisheries, personal communications.

U.S. Embassy, Copenhagen, Denmark, various reports.

World Fishing, various issues.

Table 1.--GREENLAND. Fishing fleet, by fishing port, 1983-85 and 1987-90

Fishing port	1983	1984	1985	1987	1988	1989	1990
	Number of vessels						
Nanortalik	34	32	30	26	25	26	24
Qaqortpq	25	23	27	25	23	25	27
Narsaq	15	14	13	17	19	18	18
Paamiut	63	63	63	57	56	56	58
Nuuk	62	74	69	75	80	80	80
Maniitsoq	59	54	52	53	50	50	47
Sisimiut	32	27	31	34	37	39	42
Kangaatsiaq	16	17	18	18	18	20	20
Aasiaat	15	14	15	17	19	19	20
Qasigiannguit	23	21	20	21	20	19	20
Ilulissat	60	61	56	58	62	61	63
Qeqertarsuag	8	12	13	14	14	15	14
Uummannaq	9	11	11	9	8	8	12
Upernavik	2	2	2	3	7	12	12
Avanersuaq	0	0	0	0	0	0	0
Tassiilaq	4	4	4	5	5	5	5
Ittoqqortoormiit	0	4	0	0	0	0	0
Total fleet	427	433	424	432	443	453	462

Source: OECD, Country Reports, various years and *Statistisk Årbog Grønland 1990*, p. 391.

Table 2.--Greenland. Fishing fleet, by vessel size, 1977-81, 1984-86 and 1989-90.

Vessel classification	1977	1978	1979	1980	1981	1984	1985	1986	1989	1990
	Number of vessels									
5 - 49.9 GRT	277	282	288	291	335	370	367	359	365	373
50 - 99.9 GRT	8	12	12	12	13	14	12	14	19	21
100 - 499.9 GRT	7	10	15	21	27	29	23	26	32	29
500 GRT and over	6	6	6	6	8	16	22	24	37	39
Total	298	310	321	330	383	429	424	423	453	462

Source: OECD, Country Reports, various years and *Statistisk Årbog Grønland 1990*, p. 391.

Greenland
(part of the Danish realm)

Arctic Ocean
500 km
Nord
Thule
Danmark
Havn
Baffin Bay
Itseqqortoormiit
Qeqertarsuaq
Davis Strait
NUUK
(GODTHÅB)
Ammassalik

ENDNOTES

1. Telephone discussion with Erling Hulgaard, Danish Ministry of Fisheries, on July 30, 1993.

2. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark, fax dated August 10, 1993 based on *Statistisk Årbog Grønland 1990*, p. 391.

3. Andrew W. Anderson,"Fisheries: 500 GRT stern trawler proposed for Greenland by RGTD," U.S. Embassy, Copenhagen, December 17, 1965.

4. Peter Hjul (Editor), *The Stern Trawler*, Fishing News (Books) Ltd., London, England, 1972, p. 216.

5. Andrew W. Anderson, "Two new stern-trawlers for Greenland," U.S. Embassy, January 5, 1970 (letter).

6. "Greenland," *World Fishing*, December 1973.

7. *Eurofish Report.*

8. "Greenland gets three big trawlers," *Fishing News International,* August 1983.

9. "Greenland trawler is longer and higher," *Fishing News International*, June 1984.

10. "New trawler is yard's 15th for Greenland," *Fishing News International*, June 1985, p. 18.

11. Peter D. O'Neill, "Independent Greenland gets ready to fish on her own," *Fishing News International,* August 1985, pp. 14-15.

12. "Greenland to develop fleet," *Eurofish Report*, June 16, 1986.

13. "Nanoq Trawl delivered by Langsten shipyard for Greenland owners," *World Fishing,* April 1989, p. 32.

14. "Trawler sales cut Greenland losses," *Fishing News International*, May 1990.

15. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark, fax dated August 10, 1993

16. Greenland, *Lalaallit Nunaat, 1990*, Statistical Yearbook, pp. 21-22.

17. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark, fax dated August 10, 1993

18. Telephone discussion with Erling Hulgaard, Danish Ministry of Fisheries, on July 30, 1993.

19. Telephone discussion with Erling Hulgaard, Danish Ministry of Fisheries, on July 30, 1993.

20. Søren Hansen, Senior Economic Specialist, U.S. Embassy, Copenhagen, Denmark, fax dated August 10, 1993

3.5

ICELAND

Iceland has a long tradition of fishing. Most of its fishing takes place in the frigid waters of the North Atlantic within its 200-mile Exclusive Economic Zone (EEZ). Iceland's high-seas fleet increased dramatically from 28 vessels in 1984 to 61 vessels in 1992. Icelanders fish in the North Atlantic and until recently showed little interest in distant-water fishing. Iceland, however, has vessels built to fish in distant waters and it is likely that Icelandic companies will increase their catch in internationals waters in the near future. Reductions in cod quotas, which were reduced by 25 percent in the 1993-94 fishing year,[1] will impose economic hardships on some Icelandic firms,[2] possibly resulting in the sale of some Icelandic vessels to foreign buyers. Iceland and the European Community reached agreement on fisheries and the marine environment on June 24, 1993. This agreement provides for annual consultations on the allocation of fishing possibilities and could lead to an exchange of access in the coming years.

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1. General Background

Fierce gales and icy conditions require sturdy vessels in order to operate safely in the waters around Iceland. Despite a doubling of the high-seas fleet from 30 vessels in 1986 to 61 vessels in 1992, the Icelandic catch declined from 1.7 million tons 1.5 million tons in the same years. The return of capelin from 254,400 tons in 1991 to 794,600 tons in 1992 and a projected harvest of over 1 million tons in 1993,[3] helped increase quantities landed. But these increases have been offset by a decline in cod catches which traditionally have provided an excellent source of revenue for the Icelandic economy. Iceland's cod catch peaked at 390,000 tons in 1987.

Iceland's Fisheries Management Act sets fishing quotas based on the Marine Research Institute's (MRI) research on the state of the various fish stocks. The Ministry of Fisheries has reduced the fishing quotas in recent years in order to secure a larger catch in later years. From the catch quotas for the 1993-94 fishing year, it is estimated that the value of the fish catch (in real terms) will decline in 1993 by

6 percent.[4] The value of the total fish catch in 1993 will be about 0.5-percent lower in real terms than in 1992.[5] In spite of quota reductions and reduced revenue from the fishing sector, most stocks around Iceland are in good shape. However, the cod resource, which accounts for approximately half the marine fishing industry's income, has diminished during the past years. Recent research by the MRI, based on 1993 recruitment, suggests that cod stocks are now stronger than during the past seven years. This might result in improved catches in the future, depending on other external factors, such as weather and oceanographic conditions.[6] The fishing industry is the backbone of the Icelandic economy, providing about 75-percent of the nation's export revenues. Cod accounts for about half the industry's earnings.[7] In 1991, the cod catch was 307,000 tons worth $368 million; in 1992 the cod catch declined to 266,000 tons worth $320 million.[8] Icelandic fishermen are now switching to ocean perch, capelin, and shrimp to offset the reduction in cod quotas. Diversification into new areas (especially capelin) helped increase the size of the Icelandic catch, but not the value; the catch increased from 1.1 million tons worth $863 million in 1991 to 1.6 million tons worth only $844 million in 1992.[9] An overview of the Icelandic fishing industry can be seen in tables 1-3.

2. Fleet Background

Iceland is an island nation with a tradition of fishing dating back hundreds of years.[10] Iceland declared a 50-mile fisheries limit in 1972.[11] This resulted in the "Cod War" in 1973 with British fishermen who had regularly fished these lucrative grounds. The Icelanders eventually won the fight to manage fishery resources off their coasts, which helped to spur the development of a fleet of large fishing vessels able to operate in the harsh conditions of the North Atlantic.[12] Iceland's first stern trawlers, mostly under 500-Gross Registered Tons (GRT), were purchased from Norwegian and Japanese[13] shipyards shortly after 1970. The first high-seas vessels, ranging from 700- to 1,000-GRT, were built in Poland[14] and Spain.[15] Some second-hand vessels were also purchased from Norway and the UK during this time.[16] Many of these large Spanish and Polish vessels were plagued by frequent breakdowns. Iceland's declaration of a 200-mile Exclusive Economic Zone (EEZ) in 1975[17] spurred further purchases of vessels from abroad. However, most of the vessels in the 1,000-GRT class were sold in 1975; only one vessel in the 1,047-GRT class remained in the Icelandic fleet inventory between 1977 and 1982. Icelandic shipyards began building mostly small stern trawlers in 1981 when the first stern trawler was delivered.[18] The Icelandic high-seas fleet expanded so quickly during the 1970s, that by 1979, the National Research Council reported that the fleet was 40 percent over capacity for available stocks and that a reduction was needed. The number of vessels has since decreased from approximately 1,000 vessels in 1980 to about 950 vessels in 1993.[19] The high-seas fleet remained stable at approximately 30 vessels between 1981 and 1986. The decline in vessels was due in part to an increase in the cost of diesel fuel.[20] Many vessels built after 1980 were designed to conserve fuel. The Icelandic high-seas fleet expanded from 33 vessels in 1987 to 61 vessels registering 52,000 tons in 1992. The high-seas fleet, included 13 vessels over 1,000-GRT.

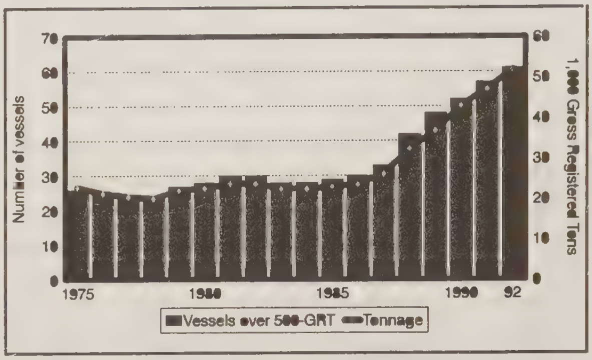

Figure 1. Iceland's high-seas fleet, 1975-92.

In 1993, the Icelandic Company, Utgerdarfelag Akureyringa, a member of the Icelandic Freezing Plants Corporation, recently purchased 60 percent of the shares in the former East German fishing company Mecklenberger Hochseefischerei fleet in Rostock.[21] The company operates a fleet of 8 processing trawlers. This arrangement does not allow the German vessels to operate as Icelandic fishing vessels and their home port is still Rostock, Germany.[22] The vessels will fish for redfish beyond 200-miles off the southwestern coast of Iceland.[23] The Icelandic fishing fleet is currently fishing for redfish using newly designed deepwater trawl gear (600 to 700 meters deep) off southwest Iceland in international waters.[24]

3. Modernization Programs

Efforts to modernize the fleet first took place in the early to mid-1970s. The high-seas fleet underwent significant expansion between 1986 and 1992. Icelandic shipyards are producing a number of modern, fuel-efficient vessels and vessels are also purchased from foreign shipyards or as second-hand imports.

Because of the unused capacity of the Icelandic fishing fleet, the government regulates all purchases and registrations of new vessels. Furthermore, there are no subsidized programs to modernize the high-seas fishing fleet.[25]

Icelandic fishermen continue to purchase modern vessels from foreign shipyards; the *Arnar,* a 2,700-GRT factory stern trawler was delivered to Skagstrendingur H/H by the Mjellum & Karlsen Verft A/S of Norway in 1992.[26] Two 688-GRT autoliners, the *Tjaldur I* and *Tjaldur II*, were also delivered to Icelandic buyers by Norwegian shipyards in 1992.[27] An Icelandic buyer took delivery of a factory stern trawler from the Spanish shipyard of Santodomingo in Vigo, Spain in July 1993. The vessel is ice-strengthened for bottom and mid-water trawling in the Arctic.[28] Other deliveries included the *Otto Whalde*, *Orfissey*, *Vigri*, and *Baldur Thorsteinsson*.

4. Decommissioning Programs

The catch of several important stocks, such as cod, are at historic lows.[29] The Icelandic government, as a consequence, has prohibited any increase in the number of vessels weighing 10 tons or less.[30] The Government acted because many of these small vessels are not cost-effective and because they are difficult to regulate.

The Government of Iceland created the Fisheries Restructuring Fund in 1990 to promote fleet reduction. Owners of decommissioned vessels may apply for final cessation premiums or sell the renewal rights for their vessels to other vessel owners, who may then commission their own new vessel. The Fisheries Restructuring Fund is financed by obligatory annual contributions from owners of vessels weighing at least 10 tons (which in turn are potential grant recipients).[31] $3.6 million was paid to the owners of 27 fishing vessels who decommissioned their vessels in 1992. These vessels had a total capacity of 1,500 GRT. Up to 30-percent of a vessel's insurance value can be paid by the Government of Iceland to fishermen willing to decommission their vessels. This can amount to a maximum of $800,000 per ship.[32]

5. Shipyards

Historically, Icelandic shipyards have built various types of fishing vessels. However, the over-capacity of the current fleet and government-subsidized shipyards in Norway, Poland and other countries, have resulted in few vessels being built in Iceland in the past decade. The largest shipyards are the Slippstodin hf, Stalvik hf, and Skipasmidastod Njardvikur hf. Most Icelandic shipyards focus on ship repairs and various service with the fishing industry and not on building new vessels[33]

6. International Agreements

Iceland has signed bilateral fishery agreements with Norway, Belgium, and the Faroe Islands. The agreement with Belgium was signed on November 28, 1975. The agreement initially allowed 12 Belgian vessels to fish in Icelandic waters; it was reduced to 8 vessels in 1979 and 7 vessels in 1981, and was allowed to expire in 1985. The agreement with the Faroe Islands was signed on March 20, 1976, and gave both parties allocations of fish in each country's waters. Similar agreements were reached with Norway on March 10, 1976; these agreements were amended in May 1980 and June 1984. The agreements permit only small amounts of cod, blue whiting, herring, capelin, or other species to be caught during specified times. The total catch by Belgian, Faroese, and Norwegian fishermen in Iceland's fisheries zone amounted to 25,400 tons in 1982, 19,600 tons in 1983, and 10,800 tons in 1984. Iceland, Norway, and Greenland have an agreement on the joint exploitation of the capelin stock around Jan Mayen Island.[34]

Iceland and the United States concluded a Governing International Fisheries Agreement (GIFA) on August 23, 1984. The agreement technically allowed reciprocal access by fishermen of the United States to Icelandic waters in exchange for access by Icelandic fishermen to U.S. waters. Icelandic officials stated that allocations were not available in

Icelandic waters and thus no U.S. fishery was allowed to develop. In December 1988, the North Pacific Fishery Management Council approved an application by an Icelandic fishing firm to harvest 30,000 tons of Pacific cod for joint venture processing. A large Icelandic stern trawler, the *Andri I* (formerly the *Roman I.*, a large UK freezer stern trawler) arrived in Alaskan waters in December 1989.[35] The late arrival of the vessel in Alaskan waters enabled it to take only a tiny fraction of its 1989 Pacific cod quota. No Pacific cod quota was available in 1990, but a permit was issued to the *Andri I* to operate in the 1990 yellowfin sole joint venture fishery. This fishery was closed on March 5, 1990, when Prohibited Species Catch Limits for halibut were reached; the *Andri I* reportedly had harvested 18 tons of yellowfin sole and other species by that date. This quantity was too small to justify continued operation of the vessel and the Icelandic owners of the vessel sold the vessel to Faroese fishing interests on March 15, 1990.[36] Icelandic authorities have renewed the GIFA with the United States since it was signed, despite the absence of any fisheries activity between the two countries.

Iceland resisted fishing agreements with the EC for many years, concerned that massive EC fleets could quickly overfish their resources. In recent years, however, Icelandic fish processors have expanded their exports to the EC and have shown an interest in reducing EC import tariffs on processed, value-added Icelandic seafood products. On May 2, 1992, Iceland and the European Community signed an agreement on fisheries and the marine environment.[37] The agreement calls for annual consultations which may result in the reciprocal granting of access by each side to fishing vessels of the other party. The agreement will last for 10 years.[38] It was made in conjunction with the European Economic Area.[39]

7. Fleet Dispersal Plans

The reduction in cod quotas, however, is expected to make fishing less profitable for some fishing companies and may result in economic difficulties.[40] This has resulted in some companies seeking new opportunities in distant-waters such as the "Loophole" area of the Barents Sea.

It was recently reported that an Icelandic stern trawler will be leased to BBGL in Murmansk and Arkangelsk Rybprom in Russia. The vessels will fish for cod in the Barents Sea. The Russians will gain experience aboard the ship and the Icelanders will keep the catch. If all goes well, an Iceland-Russian joint venture fishing company might be established.[41]

Icelandic vessels have also fished in Namibian waters and are seeking to receive quotas in 1993-94.[42] No other information is available on the number or types of vessels involved in this fishery. Icelandic companies are also reported looking at joint venture operations in Chile.[43] One Icelandic vessel, *Grand Fisherman* (375-GRT) was reflagged in Cyprus in 1993.[44]

In summary, it is likely that Icelandic fishing companies may increasingly seek new opportunities in distant waters.

SOURCES

Eurofish Report, various issues.

Fishing News International, various issues.

Folsom, William B. "Icelandic Fishery Landings and Outlook," *International Fishery Report*, 91/97, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Silver Spring, Maryland, December 20, 1991.

News from Iceland, various issues.

Office of Naval Intellligence, U.S. Navy

U.S. Embassy, Reykjavik, various reports.

U.S. Embassy, Windhok, Nambia.

World Fishing, various issues.

Table 1.--ICELAND. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	**Gross Registered Tons (GRT)**						**Total**	
	500-999		**1,000-1,999**		**Over 2,000**			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	19,500	23	3,404	3	-	-	22,904	26
1976	20,207	24	1,047	1	-	-	21,254	25
1977	19,523	23	1,047	1	-	-	20,570	24
1978	19,024	23	1,047	1	-	-	20,071	24
1979	21,041	26	1,000	1	-	-	22,041	27
1980	22,581	28	-	-	-	-	22,581	28
1981	22,640	29	1,047	1	-	-	23,687	30
1982	22,688	29	1,047	1	-	-	23,735	30
1983	22,420	28	-	-	-	-	22,420	28
1984	22,420	28	-	-	-	-	22,420	28
1985	23,002	29	-	-	-	-	23,002	29
1986	23,486	30	-	-	-	-	23,486	30
1987	23,987	31	2,048	2	-	-	26,035	33
1988	30,335	40	2,048	2	-	-	32,383	42
1989	33,462	45	3,304	3	-	-	36,766	48
1990	31,935	43	10,960	9	-	-	42,895	52
1991	34,820	47	12,196	10	-	-	47,016	57
1992	35,502	48	16,382	13	-	-	51,884	61

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Table 2.--ICELAND. Overview of the fishing industry, 1981-90.

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Total fishing fleet (GRT)	109,819	109,956	111,194	111,605	116,778	119,709	120,741	120,156	121,630	120,397
Total fishing fleet (Number of vessels)	832	829	826	822	909	957	964	997	993	953
High-seas fleet (Number of vessels)	28	28	29	30	33	42	48	52	57	61
High-seas fleet (GRT)	22,420	22,420	23,002	23,486	26,035	32,383	36,766	42,895	47,016	51,884
Catch (Metric Tons)	823,244	1,534,951	1,680,405	1,658,550	1,632,666	1,759,484	1,504,771	1,508,866	1,051,441	1,543,689
Fishermen (Number)	7,383	7,706	6,420	6,921	5,908	6,262	6,290	6,551	6,500E	6,500E

E = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet), and Icelandic Fisheries Association (fleet data for 1991-92).

Table 3.--ICELAND.--Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	1.0	0.5	0.5	0.5	0.5	0.6	0.5	0.7	0.8
Coastal[a] (Northeastern Atlantic and Baltic Sea, FAO area 27)	968.0	1,514.4	1,680.0	1,658.0	1,632.2	1,759.0	1,505.2	1,507.0	1,050.7
Distant-water:									
Northwestern Atlantic, (FAO area 21)	16.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Eastern Central Atlantic (FAO area 34)	11.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total	996.0	1,514.9	1,680.5	1,658.7	1,632.7	1,759.6	1,505.7	1,507.7	1,051.5

Source: FAO, *Yearbook of Fishery Statistics,* various years.

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[a] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

Iceland
125 km
Greenland Sea
Ísafjördhur
Húsavík
Akureyri
Seydhisfjördhur
Borgarnes
Höfn
REYKJAVÍK
Hafnarfjördhur
Vík
North Atlantic Oce

ENDNOTES

1. "Cod quota slashed 25%," *News from Iceland*, July 1993, p. 1. Iceland's cod quota has been reduced by more than 40 percent since 1991 and Icelandic scientists do not expect a recovery before 1998. The 25 percent reduction in 1992-93 is responsible for a 4 percent reduction in Iceland's Gross National Product.

2. One Icelandic company, the owner of the *Safco Endeavour,* was unable to complete refitting the vessel in a Danish shipyard following the purchase of the ship from it's Danish owners. The vessel previously fished off the Falkland Islands. "Iceland project halts," *Fishing News International,* July 1993, p. 43.

3. David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

4.David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

5. David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

6. David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

7. "Iceland's cod catch in decline," U.S. Embassy, Reykjavik, June 2, 1993.

8. "Icelandic fishing industry statistics," U.S. Embassy, Reykjavik, May 28, 1993.

9. "Icelandic fishing industry statistics," U.S. Embassy, Reykjavik, May 28, 1993.

10. For additional information see: William B. Folsom, "Icelandic Fishery Landings and Outlook," *International Fishery Report*, 91/97, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Silver Spring, Maryland, December 20, 1991.

11. This gave Iceland control over 216,000 square kilometers of ocean off its coastline.

12. Bernard Scudder, "A video in every home, a trawler in every fjord," *News from Iceland*, November 1985.

13. The Japanese vessels included the *Arnar, Bjartur, Brettingur, Drangey, Hoffell, Ljósafell, Ølafur Bekkur, Páll Pálsson, Raudinúpur,* and *Vestmannaey*. All were 462-GRT vessels built with 1972 with Niigata 2,000-hp engines.

14. The *Ogri* was one of the vessels built in Poland. The ship was a top money earner in 1979, with much of the catch being landed directly in British and West German ports. "Iceland's trawler might, *Fishing News International*, October 1980, pp. 54-55.

15. "Icelandic trawlermen design for fuel economy, monitor every stage of consumption," *The South African Shipping News and Fishing Industry Review*, September 1980, p. 47. The *Kaldbakur* was one of the vessels built in Spain. The vessel was the most successful ship in the Icelandic fleet in 1979 with a total catch of 5,619 tons.

16. The *Stella Kristina* and *Stella Karine* were built in Norway for fishermen in the Faroe Islands. "Iceland's trawler might, *Fishing News International*, October 1980, pp. 54-55. The *Skipaskagi* (formerly the *Glen Carron*, 297-GRT), *Baldur* (formerly the *Glen Urquhart*, 295-GRT), and the *Haforn* (*Glen Moriston*, 296-GRT) were UK trawlers sold to Iceland by J. Marr and Son Ltd of the UK in 1982. "British firm converts three trawlers for sale to Iceland," *National Fisherman*, September 1982, p. 52.

17. This gave Iceland control over 758,000 square kilometers of ocean off its coast.

18. The *Hilmir* was built in the Slippstodin shipyards as a combination blue whiting-capelin fishing vessel. The Stalvik shipyard in Reykjavik was also producing a trawler for delivery in 1981. "Iceland: home yards can," *Fishing news International,* October 1980, p. 56.

19. David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

20. The price of Russian heavy fuel oil went from $187 in September 1979 to $270 per ton in December 1979. Iceland was paying $330 per ton for gas oil in 1979, which was mixed with cheaper Russian fuel oil. The Icelandic fleet in 1981 was using an estimated 170,000 tons of fuel oil. "Cheap fuel grows costly," *News from Iceland*, January 1981, p.5.

21. Jon Sigurdsson, Consulate General of Iceland in New York City, NY in a fax to the authors dated August 8, 1993 and David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

22. Jon Sigurdsson, Consulate General of Iceland in New York City, NY in a fax to the authors dated August 8, 1993 and David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

23. Ian Strutt, "Iceland Buys into Rostock Fleet," *Fishing News International*, April 1993, p. 17 and Jon Sigurdsson, Consulate General of Iceland in New York City, NY in a fax to the authors dated August 8, 1993.

24. "Oceanic catches pay for Icelandic fleet," *Fishing News International*, July 1993, p. 18.

25. David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

26. "1992 Fishing Vessel Completions," *World Fishing,* March 1993, p. 52.

27. "1992 Fishing Vessel Completions," *World Fishing,* March 1993, p. 54.

28. "New ice-class trawlers for Norway and Iceland," *Fishing News International*, July 1992, p. 43.

29. "Iceland's Cod Catch in Decline," U.S. Embassy, Reykjavik, June 2, 1993. The Icelandic cod catch has fallen from 390,000 tons in 1987 to 150,000 tons for the 1993-94 quota. The last time it was this low was 1919.

30. "Icelandic Fishing Industry," U.S. Embassy, Reykjavik, May 11, 1993.

31. "Icelandic Fishing Industry," U.S. Embassy, Reykjavik, May 11, 1993.

32. *News from Iceland*, April 1993, p. 12B.

33. David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

34. David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

35. "Floating factory heads for Alaska," *Fishing News International*, December 1989, p. 39.

36. "Icelandic Fishing Vessel Andri I sold," U.S. Embassy, Reykjavik, March 15, 1990.

37. This agreement was approved by the Council of the European Communities on June 24, 1993.

38. Council Regulation (EEC) No 1737/93 of 24 June 1993 on the conclusion of the Agreement on fisheries and the marine environment between the European Economic Community and the Republic of Iceland, *Official Journal of the European Communities*, No L 161/1, July 2, 1993.

39. David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

40. "Large-scale rationalization needed to meet cutbacks," *News From Iceland*, August 1993, p. B-6.

41. "Company to operate in Barents Sea," *News from Iceland*, p. B1.

42. "IMI -- New Namibian fisheries guidelines," U.S. Embassy, Windhok, September 1, 1993.

43. David G. Wagner, Economic/Commercial Officer, U.S. Embassy, Reykjavik, Iceland, fax message, September 24, 1993.

44. Office of Naval Intelligence, U.S. Navy.

3.6

MALTA

Malta had only one vessel registering more than 500-Gross Registered Tons (GRT) in 1992, but this increased to 7 vessels in 1993. There were, in fact, a total of 33 reflagged vessels flying the Maltese flag in 1993, ranging from the *Malout (*105-GRT) to the *Norfisk II.* (2,656-GRT). The vessels included former Libyan, Norwegian, Spanish, Ukranian, and UK-flag fishing vessels. Most of the vessels are fairly small (under 200-GRT) and several have been in Malta's fishing fleet for over 15 years. Malta, however, recently added 7 fishing vessels over 1,000-GRT. The authors believe that as many as 17 vessels may have been reflagged in Malta in 1993.

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1. General Background

Malta is a small Mediterranean country consisting of three islands, Malta, Gozo, and Comino. It is about twice the size of the District of Columbia. The total area of the islands is 320 square kilometers (km). The country has a coastline of 140 kilometers. Malta has an exclusive fishing zone that extends out for 25 nautical miles and a territorial sea that extends out 12 miles. Malta, located 93 km south of Sicily, had 275 registered full-time fishermen and 1,231 part-time fishermen at the end of 1992.[1] The country reported a catch of 539 tons of fresh fish for 1992, 37 tons of which was exported, while it imported nearly twice this amount in frozen fish. The importation of fresh fish is strictly controlled.[2]

2. Fleet Background

Malta's fishing fleet consists of large numbers of privately owned small, wooden boats with a few small steel trawlers. There were 724 fishing vessels registered in Malta in 1977, including 709 small wooden boats, 11 fiberglass boats, and 4 steel ships.[3] The steel-hulled vessels included the *Hannibal* and the *Resound,* which were built for a joint venture fishing company involving Malta and Libya and the and *Malout* which was loaned or given to Malta by Morocco in the mid-1970s. *Lloyd's Register of Shipping Statistical Tables* lists one high-seas vessel registered as a fishing vessel in Malta.[4] The vessel, reportedly 998-GRT, first appeared on Malta's rolls in 1982. The ship was not listed during 1983-84 and then reappeared in 1985. At the end of 1992, there was a total of 1,417 local fishing vessels. Of these, only 30 were over 15 meters in length; 1,270 of the remaining vessels were under 9 meters long. In addition, there are an estimated 14 other fishing vessels (over 15 meters in length) operated by offshore registered companies in Malta. These vessels are not, however, allowed to fish within the Maltese fishing zone or land any fresh fish in Malta. No further details on these vessels are available, but some are thought to be included in the list of vessels shown in table 2.[5] In 1993, there were 33 vessels over 100-GRT flying the Maltese flag. This included two vessels over 2,600-GRT and 4 vessels over 1,000-GRT. It appears that as many as 17 foreign-flag vessels might have been reflagged in Malta in 1993. Information about the fleet is contained in tables 1 and 2.

3. Modernization Programs

The Government of Malta embarked upon a fleet modernization program in 1976. The plan called for the construction of 14 to 36 trawlers, well beyond the 2 trawlers recommended by the Food and Agriculture Organization of the United Nations[6] which also provided financial assistance. Experts from North Korea, Greece, and Scotland were called in to provide advice. By 1977, five trawlers had been delivered, but landings were poor and only two of the original vessels (the *Hannibal* and *Nalout*) were operating by 1978. In 1978, Malta was forced to import $4.5 million worth of canned, fresh, and frozen fish to meet the needs of the island.[7] The socialist government then turned to Libya for assistance in the form of a joint venture.

4. Decommissioning Programs

The authors are not aware of any decommissioning programs in Malta.

5. Shipyards

Malta served as an important port for the Royal Navy during World War II and reportedly has the ability to build or repair wooden and steel vessels. In 1973, the President of the Mexican company Astilleros Unidos de Mexico held talks with officials of the Malta Drydocks. It was reported that Malta Drydocks would build 12 shrimp trawlers for Brazil and 6 trawlers for Venezuela on behalf of the Mexican company.[8] It has also been reported that the People's Republic of China helped Malta build "one of the largest ship-repair docks in southern Europe."[9]

The Government of Malta encourages local fishermen to upgrade their fishing vessels and equipment. It gives grants amounting to 40% of the value of the boat, up to a maximum of $33,000, if the purchased boat is imported, and up to $17,500, in the case of locally built vessels. Grants are also given for the purchase of new navigational and other fishing equipment and the replacement of marine engines. During 1992, the Maltese government gave a total of Lm 48,000 in grants to private fishermen. The government has also undertaken to reconstruct the fish market, installing electric winches in most of the important slipways and dredge fishing ports.[10]

6. International Agreements

Malta and the Libyan Arab Jamahirija agreed to establish a joint venture fishing company in September 1978.[11] The company, called "Stad U Staghn" (Maltese for "Fish and Get Rich") was to operate 16 trawlers in Maltese and Libyan waters and to market the catch in both countries.[12] Malta reportedly received a $4.4 million loan from the Kuwait Fund for Economic Development to purchase 6 to 8 of the vessels.[13] Ten small trawlers were to have been built in the Malta Drydocks.[14] By 1982 only 2 of the joint venture's fleet of 3 vessels remained; the *Hannibal* (operated by a Maltese crew) and the *Resound* (operated by a Bulgarian crew) . The third vessel (presumed to be the *Malout*) was out of service because no crew was available to man the vessel.[15] The Maltese-Libyan fishing company reported $2 million in losses between 1978 and 1984.[16] During the 1970s and early 1980s, Malta and Morocco had cooperative agreements in fisheries. In 1978, the Government of Morocco loaned Malta two trawlers, the *Wahoud* and the *Malout*, as training ships to help the island's fishing industry.[17] Malta and Senegal signed a cooperative fisheries agreement on January 24, 1979, which reportedly allowed Maltese-built fishing vessels to fish in Senegalese waters as part of a Malta/Senegal joint venture fishing company.[18] Malta also has reached cooperative agreements with Tunisia[19] and has cooperated with Japan in fisheries.[20] At present, Malta has no valid international fishing agreements, but it is a member of the General Fisheries Council for the Mediterranean.[21]

7. Fleet Dispersal Plans

The U.S. Embassy in Valletta reports that Malta has no fleet dispersal plans.[22]

SOURCES

"Agreement signed to create joint Libya-Malta fishing company," *International Fisheries Report*, IFR-78/133, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., August 17, 1978.

Central Office of Statistics, *Census of Agriculture and Fisheries, 1976-77*, Department of Information, Valletta, 1978

Fishing News International, various issues.

"Malta Drydocks to build trawlers," *The Malta Economist*, June 1973

"Malta seeks trawl fleet," *The Fisherman*, September 5, 1975

"Maltese speech in China causes Soviet walkout," *New York Times*, November 4, 1977.

Office of Naval Intelligence, U.S. Navy

U.S. Embassy Valletta, various reports.

Malta

10 km
Gozo
Rabat
Kemmuna
Mediterranean Sea
Malta
VALLETTA
Rabat
Mediterranean Sea
Marsaxlokk
Birżebbuġa
Filfla

Table 1.--MALTA. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	-	-	-	-	-	-	0	0
1976	-	-	-	-	-	-	0	0
1977	-	-	-	-	-	-	0	0
1978	-	-	-	-	-	-	0	0
1979	-	-	-	-	-	-	0	0
1980	-	-	-	-	-	-	0	0
1981	-	-	-	-	-	-	0	0
1982	998	1	-	-	-	-	998	1
1983[a]	-	-	-	-	-	-	0	0
1984	-	-	-	-	-	-	0	0
1985	998	1	-	-	-	-	998	1
1986	998	1	-	-	-	-	998	1
1987	998	1	-	-	-	-	998	1
1988	998	1	-	-	-	-	998	1
1989	998	1	-	-	-	-	998	1
1990	998	1	-	-	-	-	998	1
1991	998	1	-	-	-	-	998	1
1992	998	1	-	-	-	-	998	1

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[a] The authors have no information to explain why the vessels were not listed in 1983-84. The Office of Naval Intelligence of the U.S. Navy has no information about a vessel registering 998-GRT in its files.

Table 2.--MALTA. Listing of reflagged fishing vessels registered in 1993.

Name	Tonnage	Country and year the vessel was built		Previous flag	Vessel type
		Country	Year		
	Gross Registered Tons				
Acros No. 2.	284	Japan	1974		Stern trawler
Acros No. 3.	299	Japan	1977		Stern trawler
Antonio Gancitano	194	Italy	1971		Vessel, nes
Areos	183	Italy	1971	Libya	Vessel, nes
Arion II	473	East Germany	1963		Stern trawler
Canarino	199	Italy	1971	Libya	Vessel, nes
Ciclamino	199	Italy	1971		Vessel, nes
Dnestr	1,361	USSR	1970	Ukraine	Factory trawler
Elenaki P.S.	268	Netherlands	1957		Stern trawler
Gaspare Asaro	165	Italy	1974		Stern trawler
Izaro	1,539	Spain	1976	Spain	Tuna vessel
Kai Alai	1,300	Spain	1975	Spain	Factory trawler
Kurema Maru	214	Japan	1971		Refrigerated trawler
Leonidas	148	Greece	1974		Stern trawler
Madonna dell'Alto Mare Sec	168	Italy	1973		Stern trawler
Malout[b]	105	Italy	1975	Libya	Stern trawler
Manwel	173	East Germany	1974	Libya	Vessel, nes
Magrit Rye	245	Netherlands	1965		Stern trawler
Maria Bernadette	194	Italy	1970		Stern trawler
Norfisk I.	2,655	Poland	1973	UK	Factory trawler
Norfisk II.	2,656	Poland	1973	UK	Factory trawler
North Sea Surveyor	1,237	Norway	1986	Norway	Refrigerated trawler
Osiride	196	Italy	1973		Stern trawler

[b] A vessel reportedly given or loaned to Malta by Morocco in the mid-1970s.

Palma Prima	195	Italy	1974	Libya	Stern trawler
Paola Bassi	194	Italy	1972		Stern trawler
Queen Mary Three	174	Spain	1974		Stern trawler
Resound[c]	145	U.K.	1970		Stern trawler
S. Terenzio	199	Italy	1972		Vessel, nes
Saint Martin	781	Poland	1967		Stern trawler
Salvatore Gancitano	199	Italy	1972		Stern trawler
Sicula Pesca	150	Italy	1981		Stern trawler
Taxiarchis	284	France	1956		Stern trawler
Trionfale	132	Italy	1956		Stern trawler

Source: Office of Naval Intelligence, U.S. Navy.

[c] One of 4 steel-hulled vessels operated as a joint venture fishing company with Libya in 1977. The *Hannibal* was not listed as operating in 1993. The names of the other 2 vessels are not available.

ENDNOTES

1. "Help for Gozo fishermen," and "Maltese pay out," *Fishing News International,* May 1990 and October 1989 respectively, and fax from Paul Andersen, Commercial Officer, U.S. Embassy Valletta, August 20, 1993.

2. Fax from Paul Andersen, Commercial Officer, U.S. Embassy Valletta, August 20, 1993.

3. Central Office of Statistics, *Census of Agriculture and Fisheries, 1976-77*, Department of Information, Valletta, 1978, p.75.

4. The Office of Naval Intelligence, U.S. Navy, reports that the former Japanese vessel *Kurema Maru* (214-GRT) was listed on Malta's registry of fishing vessels. The *Kurema Maru* was built in 1971 as is identified as a refrigerated trawler.

5. Fax from Paul Andersen, Commercial Officer, U.S. Embassy Valletta, August 20, 1993.

6. "Malta seeks trawlers from Arabs," *Fishing News International*, April 1978, p. 15.

7. FAO Country Profiles, "Malta," *Fishing News International*, August 1980, p. 70.

8. "Malta Drydocks to build trawlers," *The Malta Economist*, June 1973, p. 6. The article did not explain why a Mexican company was building shrimp trawlers for Brazil and Venezuela.

9. "Maltese speech in China causes Soviet walkout," *New York Times*, November 4, 1977.

10. Fax from Paul Andersen, Commercial Officer, U.S. Embassy Valletta, August 20, 1993.

11. "Malta to start trawler fleet," *Fishing News International*, June 1978.

12. "Malta seeks trawlers from Arabs," *Fishing News International*, April 1978, p. 15.

13. "Malta to start trawler fleet," *Fishing News International*, June 1978 and "Malta/Libya fisheries agreement," U.S. Embassy, Valletta, August 1, 1978.

14. For information on the Malta/Libya joint venture see: "Agreement signed to create joint Libya-Malta fishing company," *International Fisheries Report*, IFR-78/133, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D.C., August 17, 1978.

15. "Big losses for Malta-Libya trawler venture," *Fishing News International*, August 1982.

16. "Maltese Economic/Commercial Developments, December 1985," U.S. Embassy, Valletta, January 8, 1986.

17. "Return trip," *Fishing News International*, February 1979.

18. "Malta/Senegal trade agreement signed," U.S. Embassy, Valletta, january 30, 1979.

19. "Malta/Senegal Trade Agreement Signed," U.S. Embassy, Valletta, January 30, 1979.

20. "Malta seeks trawl fleet," *The Fisherman*, September 5, 1975, p. 10. The Office of Naval Intelligence, U.S. Navy, reports that the former Japanese vessel *Kurema Maru* (214-GRT) was listed on Malta's registry of fishing vessels. The *Kurema Maru* was built in 1971 as is identified as a refrigerated trawler. The vessel could be a gift to Malta by the Government of Japan as a training vessel. The authors have no further information about this vessel.

21. Fax from Paul Andersen, Commercial Officer, U.S. Embassy Valletta, August 20, 1993.

22. Fax from Paul Andersen, Commercial Officer, U.S. Embassy Valletta, August 20, 1993.

3.7

NORWAY

The Norwegian high-seas fleet of 139 vessels as of 1992, is equipped to process a variety of fish and shellfish and to deliver a high quality product to customers around the world. The Norwegian high-seas fleet[1] began expanding rapidly in 1986, peaking at 143 vessels in 1990. Substantial catches of cod, capelin, Atlantic herring, Atlantic mackerel, sandeels, and other species in recent years are keeping Norwegian fishermen busy harvesting these species in domestic waters. Norwegian shipyards produce high quality vessels that are sold to fishermen all over the world. Seven Norwegian factory trawlers fished off Australia and New Zealand in 1992. These distant operations have not proven profitable. A shift in Norway's fishing fleet to distant grounds is not anticipated. Several Caribbean-flag vessels have recently begun fishing in international waters between Norway and Russia.

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1. General Background

Norway is Western Europe's leading producer of fish and shellfish by virtue of its harvest of 2.4 million tons of fish and shellfish in 1992.[2] Norway controls some of the richest fishing grounds in the world. Norwegian waters provide excellent conditions for spawning and growth of healthy stocks of fish. Fishing is important to the people of coastal Norway as well as to the nation's social structure.[3] Fisheries is also a vital economic activity for the country: The value of the 1992 catch was $784 million and Norway's exports of fishery products amounted to 1,235,000 tons worth $2.1 billion.[4] Exports of fishery products in 1992 rank third after petroleum and metals and constitute about 7.0 percent of the nation's exports in terms of value.[5] Fishing is important along the country's 21,925 kilometer coastline, and especially in isolated fishing villages.

The most important species in Norwegian marine fisheries are Atlantic cod, Atlantic herring, mackerel, and capelin. Unlike all North Atlantic countries (from Canada to Greenland to Iceland to the United Kingdom), Norway has seen a return of Atlantic cod stocks. Norway's catch of Atlantic cod went from

161,000 tons in 1991 to 213,000 tons in 1992. The value of Norway's exports of cod products was nearly $590 million in 1992.[6] In addition to cod, Norwegian fishermen also benefited from a resurgence in capelin stocks; the catch of capelin went from 92,000 tons in 1990 to 576,000 tons in 1991 to 808,000 tons in 1992. The catch of Atlantic herring has declined in recent years, but accounted for 220,000 tons in 1992. Atlantic mackerel landings were 207,000 tons in 1992. Norway pout (165,000 tons), Saithe (160,000 tons), blue whiting (154,600 tons), horse mackerel (106,000 tons), sandeels (92,800 tons), haddock (38,000 tons), redfish (35,000 tons), sprat (32,500 tons), ling (21,400 tons), and Greenland halibut (11,000 tons), were also important fish caught in Norwegian waters in 1992. Harvests of Norway lobster and deepwater shrimp provide valuable income for these prized shellfish. Norway is also the world's leading producer of farmed Atlantic salmon and 1992 exports of 123,500 tons of fresh, chilled or frozen salmon (excluding fillets) generated $604 million in export earnings![7] Fish stocks are healthy and Norwegian fishermen are among the few enjoying a profitable season. The main product forms are fresh, frozen, dried, and salted fish as well as fishmeal and oil and a variety of canned products. The boom in Norway's production of farmed salmon has led to the development of new, value-added products. The resumption of commercial whaling in Norway might lead to consumer boycotts of Norwegian fishery products that would be a setback to the fishing industry. An overview of the Norwegian fishing industry can be seen in tables 1-3.

2. Fleet Background

Norway has a total fishing fleet of about 17,000 vessels, making it the leader among the non-EC nations of Western Europe. The Norwegian fishing fleet consists mainly of small coastal vessels which range from small, one-man boats to large trawlers and purse seiners. The number of vessels in the fleet has declined in recent years. The Norwegian high-seas fleet had its origin in the 1960s and 1970s.[8] The *Gadus I* (1,530-GRT) and *Gadus II* (1,600-GRT) were built in 1969 and 1970 respectively and were the first Norwegian stern trawlers over 1,000-GRT.[9] By 1975, the fleet consisted of 8 vessels over 1,000-GRT fishing the Norwegian quota of Arctic cod off the coast of Finnmark and in the Barents Sea.[10] The Norwegian high-seas fleet grew slowly though the 1980s. The fleet expanded from 98 vessels in 1985 to 143 vessels in 1990, as fishermen began ordering large vessels (over 1,000-GRT) with on-board processing equipment. Norwegian fishermen eventually plan total of 30 fully equipped factory vessels able to process approximately 200,000 tons of cod at sea.[11] This expansion program was taking place at the same time that the fleet of smaller-sized boats was being gradually reduced.[12] It was also reported that 33 of the 40 ringblock vessels operating in northern Norway were 20 or more years old and replacement programs for modernizing the Norwegian fleet were needed.[13] The Norwegian fleet also includes a number of large, pelagic purse seiners that fish for herring and capelin. The Norwegian high-seas fleet in 1992 included 75 vessels in the 500- to 999-GRT class, 52 vessels in the 1,000- to 1,999-GRT class and 12 vessels over 2,000-GRT as shown in table 1.

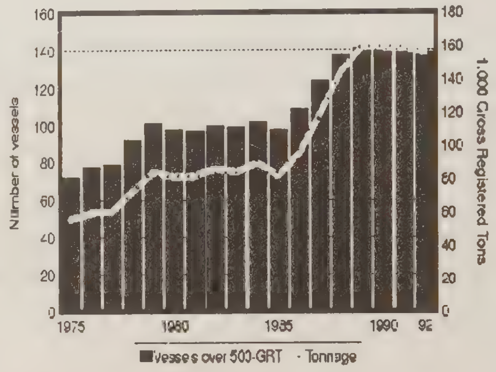

Figure 1.--Norway's high-seas fleet, 1975-92.

3. Modernization Programs[14]

The National Fishery Bank (NFB) is charged with providing credit to promote the development of the Norwegian fishing fleet. The NFB provides mortgage loans and administers aid programs. In 1991, the NFB provided loans amounting to $416 million, which included $340 million in first mortgage loans. The NFB loan program covers 70 percent of the total investment in a fishing vessel. Loans are provided for a maximum period of 12 years at 12.5-percent (1990-92). Second mortgages are also available. Shipowners were limited to a maximum loan of $77 million in 1990 and to $54 million during 1991-93. NFB investment grants are also available for the financing of coastal fishing vessels in regions where fishing is the main activity.

The modernization program appears to be very effective. The high-seas fleet increased from 72 vessels in 1975 to 143 vessels in 1990, before decreasing to 139 vessels in 1992.

4. Decommissioning Programs

Norway has a long history of supporting efforts to decommission old and ineffective fishing vessels. One of the programs was initiated in 1979 and ended with the scrapping of 124 vessels.[15] Another program ended in 1982 with 140 vessels over 15 meters in length being decommissioned.[16] Most of these early programs were aimed at the large number of small vessels which dominated the Norwegian fishing fleet. During the last 3-4 years, these programs have been increased. Recent initiatives include:

> Financial support for the scrapping of old vessels (mostly coastal vessels). Since 1978, the Government has spent approximately $148 million on the scrapping of 950 vessels.
>
> Financial support for the sale of larger, offshore vessels to other nations, leading to the permanent withdrawal of the vessels from Norwegian fisheries.
>
> Financial support for the laying-up of vessels for a limited period.
>
> Reduction in the financial support for operational costs in Norwegian fisheries.

In addition to these financial programs, the Government of Norway has also initiated administrative programs limiting the growth of the Norwegian fishing fleet. These programs include:

> Restrictions on loans for investment in vessels, gear, and other equipment and reduction in investment subsidies.
>
> Strict limitations on the granting of new licenses for replacement of licensed vessels.
>
> Regulations on the rate of replacement in the fishing fleet.
>
> Possibilities for the merging of quotas of licensed vessels in the Norwegian cod fishery. This allows one vessel to benefit from another vessel's cod quota, provided the second vessel is withdrawn from the cod fishery on a permanent basis.

The program to reduce the fishing fleet appears to be less effective than the program to modernize the fleet in recent years. In 1992, 34 vessels were withdrawn.

5. Shipyards

Norwegian shipyards rank among the best in the world. Ten Norwegian shipyards reported building 19 new fishing vessels in 1992.[17] These vessels ranged in size from the 24-GRT *Hans Robert* built by Arctic Boat A/S in Guasvik for Hans Karisari of Vadsø to the 2,700-GRT *Northern Osprey* built for M.V. Osprey Ltd., of Halifax, Nova Scotia, in Canada by the Mjellum & Karlsen Verft A/S of Bergen. The Sterkoder A/S shipyards were also active in the construction of six 1,900-GRT factory stern trawlers for the Rider Shipping Corporation of Monrovia, Liberia. Four of these stern trawlers were delivered: *Peter, Iljin,*[18] *Admiral Nevelskoj*, and *Victoria*.[19] One ship, the *Mikhail Levashov* was not delivered due to lack of funding. The last vessel, the *Amaltal Colombia*, was sold to the Amatal Fishing Company, Ltd. of Auckland, New Zealand. Norwegian shipyards also built fishing vessels for customers in France (*Ligrunn*, 768-GRT), Iceland (*Vigri,* 1,217-GRT, *Arnar* [no GRT reported], *Tjaldur* and *Tjaldur II,* 688-GRT), and Poland (*John Erik*, 492-GRT and *Baldvin Torsteinsson* [no GRT reported]). On April 29, 1993, the Norwegian shipyard Søviknes Verft AS delivered an ultra-modern autoliner to Nichimo Co. Ltd. of Japan with the unusual name of *Kapitan Kartashov* (1,079-GRT). The vessel will operate out of Vladivostok for a Russian company affiliated with Nichimo and will fish for Pacific cod, halibut, and rockfish. This is the first of two identical vessels for Nichimo; the second vessel, the *Kapitan Samoilenko*, was delivered on June 11, 1993.[20] Norwegian shipyards are able to produce highly efficient fishing vessels and are an important source of new vessels for fishermen around the world.

6. International Agreements

Norway holds annual fishery consultations with a number of countries. In 1992, discussions were held with Russia, the EC, the Faroe Islands, Greenland, Sweden, and Poland. In each instance, access for Norwegian fishing vessels or fishing quotas are sought in exchange for reciprocal access to Norwegian grounds or fishing quotas. Norway also participated in the North East Atlantic Fisheries Commission (NEAFC) and in the Northwest Atlantic Fisheries Organization (NAFO).

Russia: A series of negotiations between Norway and Russia during 1992 resulted in several bilateral agreements covering several species. These agreements provided for quotas for Arcto-Norwegian cod (356,000 tons) and capelin (1,084,000 tons), and set up rules governing the by-catch of Greenland halibut. These accords cover both the Norwegian Sea and the Barents Sea.

European Community: Norway and the EC came to an agreement on quotas in the North Sea. The agreement included allocations of joint stocks betweeen the two parties. Norway received a quotas of 112,610 tons of herring and 54,415 tons of mackerel in the North Sea. Norway was also allowed 232,000 tons of blue whiting in an area including the EC's EEZ as well as that of the Faroe Islands.

Iceland: Norway and Iceland reached an agreement on reciprocal fishing on March 10, 1976. These agreements have since been amended. The agreement permits small quantities of cod, blue whiting, herring, capelin, and other species to be caught by Norwegian vessels in Icelandic waters and Icelandic vessels in Norwegian waters during specified times.

Faroe Islands: Norway and the Faroe Islands have a reciprocal fisheries agreement which allows fishermen from each country to fish in waters of the other country.

Greenland: The Governments of Norway and Greenland reached an agreement on fishing rights for cod in late 1991. The agreement gives Greenland a TAC for cod in the North Sea and Barents Sea in exchange for Norwegian fishing in Greenland's 200-mile exclusive economic zone. The agreement was arbitrated by Denmark.

Sweden: There is a special tripartite agreement between Norway, Sweden, and Denmark dating back to 1966 which lasts until 2001. The agreement allows fishermen from each country to fish up to 4 nautical miles from the baselines in the area of the Skagerrak and the northern part of Kattegat, irrespective of fisheries zones. The EC has assumed legal responsibility to negotiate on behalf of Denmark in 1978.[21]

Jan Mayen: Norway has agreements with the EC, Iceland, Greenland, Russia, the Faroe Islands, and Poland concerning cooperation in the management of capelin stocks which migrate between the Fishery Zone around Jan Mayen and the Icelandic and Greenland zones.[22] The agreements also allow for fishing of blue whiting in the region.

Norway experienced problems with Caribbean-flag fishing vessels in 1993. Two Caribbean-flag vessels were discovered fishing in the "loophole" around the Svalbard. The area is in international waters around the Svalbard which is jointly administered by Norway and Russia. A second "loophole" exists in the Barents Sea between the Russian and Norwegian EEZs in the Barents Sea.[23]

The trouble started during the summer of 1993 when Norway expelled two Caribbean-registered fishing vessels from the area around Svalbard. The vessels had sold their catch of cod in Iceland. Following their expulsion, the vessels sailed to the Barents Sea loophole, where they were joined by 4 other vessels.[24]

7. Fleet Dispersal Plans

The Government of Norway in 1991 studied the possibilities of government support for fishing in distant-waters. The Government concluded that no policy was needed to encourage or discourage Norwegian fishermen from fishing in distant-waters. The Norwegian fleet is free to operate anywhere it wishes, provided its activity is consistent with international agreements and the legislation of coastal states. Norwegian fishermen established joint venture operations off New Zealand in 1989 and fished there for 2 years. The venture apparently was not successful and no catches have been reported for 1991 (table 3). FAO catch data also indicates that Norwegian vessels fish in the Eastern Central Atlantic, where they average under 2,000 tons per year (table 3). Norwegian vessels caught 1,400 tons (mostly illex squid) in the Falkland's EEZ in 1990; they have not returned since that year (see Appendix 30). Norwegian vessels fish in waters off western Greenland (table 3). Norway's total distant-water catch of 5,100 tons was only a tiny fraction of the nation's total catch of 1,980,000 tons in 1991.

Norwegian high-seas vessels are mostly built to operate in the cold waters of the North Atlantic. It is unlikely that these vessels can operate profitably in many other fisheries, although one large Norwegian vessel, *Mys Vindis,* (1,899-GRT) was reflagged in Cyprus in 1993.[25] In the past, vessels have generally been sold to other Nordic countries or to the UK where they have been used to fish in the North Atlantic. Norwegian fishing vessels are routinely sold to fishermen in Greenland, the Faroe Islands, Scotland, and other northern countries. Some vessels have been reconfigured to work in the offshore oil fields.

In summary, at the present time it is unlikely that Norwegian high-seas vessels will be deployed beyond the North Atlantic groundfish, pelagic, or blue whiting fishing grounds in the foreseeable future. Vessels built in Norwegian shipyards, however, are likely to appear in distant-water fisheries throughout the world.

SOURCES

Eurofish Report, various issues.

European Supplies Bulletin, Annual Data, 1992, Sea Fish Industry Authority, Edinburgh, 1993.

Fishing News International, various issues.

Food and Agriculture Organization, *Fishery Statistics, Catches and Landings, 1990,* Volume 70, United Nations, Rome, 1992.

France Pêche, September 1987.

Hansen, Torstein Assistant Director General and Krisin Alnes, Sr. Executive Officer, Royal Ministry of Fisheries, letter to Ivar Øsby, Embassy of the United States, Oslo, Norway dated April 22, 1993.

Hjul, Peter. *The Stern Trawler,* Fishing News (Books), London, 1972, pp.168-176.

Larsen, Birger. Royal Norwegian Embassy, Washington, D.C.

Office of Naval Intelligence, U.S. Navy.

Øsby, Ivar. Embassy of the United States, Oslo, Norway various communications.

The Royal Norwegian Ministry of Fisheries, *Quota Regulations in Norwegian Fisheries Zones for 1989,* Oslo, August 25, 1989, p.4.

U.S. Embassy, Oslo, Norway, various reports.

Wade, Nick. "Norway Ends Scrapping Programme," *Fishing News International*, July 1981, p. 3.

World Fishing, various issues.

Table 1.--NORWAY. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	45,088	64	10,822	8	-	-	55,910	72
1976	52,374	73	7,054	5	-	-	59,428	78
1977	51,899	73	8,366	6	-	-	60,265	79
1978	59,209	82	13,016	10	-	-	72,225	92
1979	60,636	84	20,169	16	2,909	1	83,714	101
1980	59,354	82	19,124	15	2,909	1	81,387	98
1981	56,799	79	19,727	16	5,092	2	81,618	97
1982	56,501	79	21,968	18	7,648	3	86,117	100
1983	56,982	79	22,045	18	5,001	2	84,028	99
1984	56,701	79	27,638	21	5,001	2	89,340	102
1985	57,507	79	24,317	19	-	-	81,824	98
1986	62,297	85	30,122	23	2,425	1	94,844	109
1987	63,268	87	43,806	32	12,015	5	119,089	124
1988	63,655	87	60,651	42	20,692	9	144,998	138
1989	57,226	78	71,516	50	30,850	13	159,592	141
1990	56,817	79	73,974	52	28,550	12	159,341	143
1991	54,550	76	78,489	55	26,132	11	159,171	142
1992	54,359	75	73,429	52	28,188	12	155,976	139

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Table 2.--NORWAY. Overview of the Norwegian fishing industry, 1983-92

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT). Decked vessels only.	280,921	287,483	287,301	352,532	452,754	284,343	287,044	284,401	268,940	295,430
Total fishing fleet (Number of vessels). Open and decked vessels.	26,045	25,564	24,078	23,078	22,014	20,935	18,514	17,392	17,232	17,069
High-seas fleet (Number of vessels)	99	102	98	109	124	138	141	143	142	139
High-seas fleet (GRT)	84,028	89,340	81,824	94,844	119,089	144,998	159,592	159,341	159,171	155,976
Catch (Metric Tons)	2,812,600	2,440,000	2,083,700	1,864,300	1,892,675	1,749,564	1,788,653	1,591,577	1,980,035	2,384,980
Fishermen (Number)	28,046	29,632	29,559	29,981	29,915	29,350	28,655	27,518	27,000E	27,000E

Sources: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years (fleet), and Birger Larsen, Royal Norwegian Embassy, Washington, D.C. (fleet and catch statistics).

Table 3.--NORWAY. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	-	8.3	0.4	0.4	0.4	0.3	0.5	0.5	0.5
Coastal[a] (Northeastern Atlantic and Baltic Sea, FAO area 27)	2,485.0	2,395.4	2,115.2	1,907.0	1,948.0	1,840.0	1,900.1	1,688.1	2,090.3
Distant-water:									
NE Atlantic, FAO area 21	53.0	5.3	2.1	5.4	0.4	2.0	5.3	16.9	5.1
Eastern-Central Atlantic, FAO area 34	13.0	-	1.3	1.4	1.0	1.3	2.0	1.8	-
South-Central Pacific, FAO area 81	-	-	-	-	-	-	1.2	4.0	-
Sub-toal	66.0	5.3	3.4	6.8	1.4	3.3	8.5	22.7	5.1
Total	2,551.0	2,409.0	2,119.0	1,914.2	1,949.8	1,843.6	1,909.1	1,711.3	2,095.9

Source: FAO, *Yearbook of Fishery Statistics*, various years.

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[a] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

ENDNOTES

1. Mr. Birger Larsen, Fisheries Attache, Royal Norwegian Embassy, Washington, D.C. notes that the term "high-seas" is not appropriate for the Norwegian fleet which mostly fishes in coastal waters. He did note that some Norwegian vessels fish in distant waters.

2. Food and Agriculture Organization, *Fishery Statistics, Catches and Landings, 1990,* Volume 70, United Nations, Rome, 1992, p.89.

3. "Norway has jurisdiction over some of the world's richest fishing grounds; the following is an overview of its fisheries," *World Fishing,* July 1990, p.8.

4. Birger Larsen, Fisheries Attache, Royal Norwegian Embassy, Washingto, D.C., personal communication on September 30, 1993.

5. "First semester 1993 Norwegian foreign trade," U.S. Embassy, Oslo, August 9, 1993.

6. Central Bureau of Statistics, as cited in *European Supplies Bulletin, Annual Data, 1992*, Sea Fish Industry Authority, Edinburgh, 1993, p.35-37.

7. Based on an exchange rate of 7.35 Norwegian kroner = US$1.00.

8. Peter Hjul, *The Stern Trawler,* Fishing News (Books), London, 1972, pp.168-176.

9. Peter Hjul, *The Stern Trawler,* Fishing News (Books), London, 1972, p. 171.

10. "Vessels that Attract the Young Men..." *Fishing News International*, March 1978, p. 21.

11. *Eurofish Report*, April 14, 1986.

12. *France Pêche*, September 1987, p. 42.

13. *Eurofish Report*, February 13, 1986, p. FS/1.

14. Letter from Torstein Hansen, Assistant Director General and Krisin Alnes, Sr. Executive Officer, Royal Ministry of Fisheries, to Ivar Øsby, Embassy of the United States, Oslo, Norway dated April 22, 1993. This letter provides details on the information which is presented in this report.

15. Nick Wade, "Norway Ends Scrapping Programme," *Fishing News International*, July 1981, p. 3.

16. *Fishing News International*, June 1983.

17."1992 Fishing Vessel Completions," *World Fishing*, March 1993, pp. 51-54.

18. A vessel identified as the *Petr Iljin* was registered in Cyprus in 1993. The vessel was built in Norway in 1992 and registered 1,919-GRT. The authors suspect that this was one of the vessels delivered to the Liberian firm and may have been renamed or it may be one vessel instead of the reported 2 vessels.

19. The vessels were apparently destined for Russian fisheries.

20. "MV Kapitan Kartashov," *World Fishing*, June 1993, p. 65 and "Autoliners sail from Norway," *Fishing News International,* August 1993, p. 23.

21. The Royal Norwegian Ministry of Fisheries, *Quota Regulations in Norwegian Fisheries Zones for 1989,* Oslo, August 25, 1989, p.4.

22. The Royal Norwegian Ministry of Fisheries, *Quota Regulations in Norwegian Fisheries Zones for 1989,* Oslo, August 25, 1989, p.4.

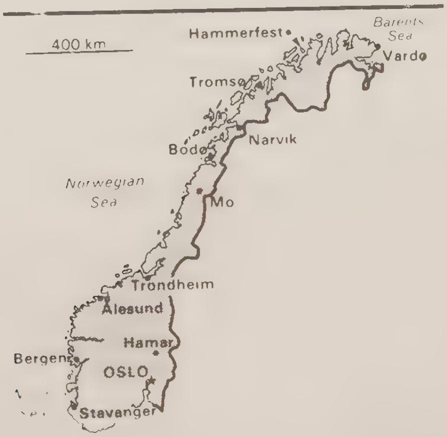
23. "Norway acts on fishing in Barents Sea "loophole," U.S. Embassy, Oslo, Norway, August 18, 1993.

24. "Norway acts on fishing in Barents Sea "loophole," U.S. Embassy, Oslo, Norway, August 18, 1993.

25. "Norway acts on fishing in Barents Sea "loophole," U.S. Embassy, Oslo, Norway, August 18, 1993, Office of Naval Intelligence, U.S. Navy, and Nick Wade, "Barents Sea 'Hole' Dispute," *Fishing News International*, September 1993, pp. 1-2.

26. Office of Naval Intelligence, U.S. Navy.

Norway


400 km
Hammerfest
Barents Sea
Vardø
Tromsø
Narvik
Bodø
Norwegian Sea
Mo
Trondheim
Alesund
Hamar
Bergen
OSLO
Stavanger

3.8

SWEDEN

The Swedish high-seas fleet grew from 3 vessels in 1988 to 8 vessels in 1992 before declining to 7 vessels in 1993. All of these vessels are under 1,000-Gross Registered Tons (GRT). Sweden's coastal fishing vessels tend to be heavier than coastal vessels in warmer climates in order to operate savely in the harsh northern weather. It is unlikely that Sweden's vessels will move to distant fishing grounds in the near future.

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1. General Background

Fishing is not a significant industry in Sweden. It is, however, of importance to many coastal communities. Sweden's catch peaked at around 400,000 tons in 1964 when nearly 200,000 tons of Atlantic herring (*Clupea harengus*) were landed. The collapse of the North Sea herring stock, however, signaled a contraction of Sweden's fisheries which declined by half and never fully recovered.[1] Swedish fisheries were impacted again in the 1970s, when many nations extended their exclusive fishery zones to 200 miles, excluding Swedish fishermen from their traditional fishing grounds.[2] Many fishermen sold their vessels and sought other occupations during this time.[3] Sweden's landings have fluctuated near the 250,000 ton level for the past two decades, but the catch totaled 320,000 tons in 1992.[4] Swedish high-seas vessels traditionally fish for herring and mackerel in the North Sea and other species in the Baltic,[5] the Skagerrak, and the Kattegat. With the decline in Swedish fisheries, seafood processors have turned to foreign suppliers to meet the growing demand for seafood in Sweden and Europe. In 1992, Sweden imported 100,000 tons of fish and shellfish valued at approximately $437 million.[6] Processing seafood is an important business in Sweden today. Annual consumption of fishery products is around 26 kilograms of fish per capita; two thirds of this fish is imported and one-third caught by Swedish fishermen.[7] Modest quantities of herring and industrial fish (i.e., fish used for reduction into fishmeal and fishoil) are landed in Denmark which is the major market for these types of fish.[8] Sweden has a 2,862 kilometer coastline consisting of many bays, coves, and islands. The Swedish shelf area includes 165,295 square kilometers. The country also has some 100,000 lakes covering about 38,000 square kilometers. This has attracted many individual fishermen who operate small fishing boats from many ports. Unfortunately, the low salinity of the Baltic yields only a few species of fish. Without access to distant fishing grounds, the Swedish fishing effort has been increasingly limited.[9] For additional information on Sweden's fishing industry refer to tables 1 to 3.

2. Fleet Background

The total fishing fleet (powered vessels) has gradually declined from 4,000 vessels in 1981 to 1,638 licensed fishing vessels in 1992.[10] The high-seas fleet grew from 3 vessels in 1988 to a high of 8 vessels in 1992 (table 1 and figure 1).[11]

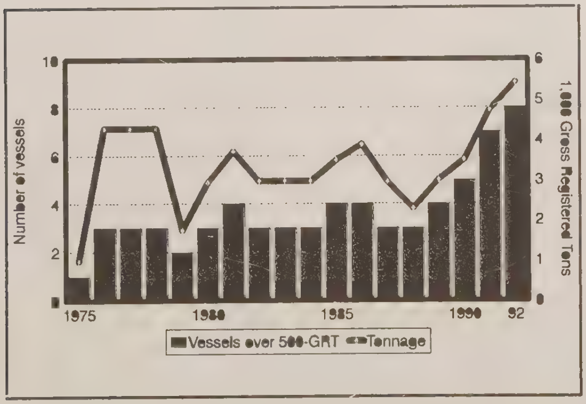

Figure 1. Sweden's high-seas fishing fleet, 1975-92.

Between 1976 and 1978, there was one 2,508-GRT vessel operating under the Swedish flag. That vessel was decommissioned in 1979, and has never been replaced. A 1,181-GRT vessel began operating in 1980, but was sold or otherwise decommissioned in 1987 and it also has never been replaced. Sweden's high-seas fleet in 1992 consisted of 8 vessels, all under 1,000-GRT. The Swedish high-seas fleet in 1993 included: *Argos* (985-GRT), *Ganthi* (534-GRT), *Ginneton* (534-GRT), *Lavon* (511-GRT), *Polar* (690-GRT), *Teaterskeppet* (774-GRT), and the *Torland* (716-GRT).[12]

3. Modernization Programs

In 1984-85, the Swedish government allocated just under $6 million in state aid to modernize the Swedish fishing fleet. The program included low interest loans for vessel construction, subsidies for new vessels, and funds to assist fishermen shifting into more profitable types of fishing.[13] Similar programs were reported for 1991-92 by the Government of Sweden; slightly more than $0.8 million was made available for the construction of new fishing vessels, and the purchase of second-hand vessels.

The Government budget for support to Swedish fisheries for the 1992-93 fiscal year was $5 million. The ceiling for credit guarantees to fishing companies has been $9.4 million in the loan program for FY 1992-93.[14]

As of FY 1993-94, the fishery loan program will be abolished. Government support for modernizing the fishing industry will only be provided in the form of credit guarantees in the future. The allocation for FY 1993-94 will be $3.3 milllion and the funds will be used for modernization, supporting idle vessels, and improving quality controls in the fishing industry. Of the total amount, a little more than half is earmarked for the modernization of the fishing fleet.[15]

4. Decommissioning Programs

The Swedish government has introduced scrapping subsidies as part of an overall program to modernize the country's fleet of small, aging vessels.[16]

5. Shipyards

Swedish shipyards produce mostly small craft for local fishermen. However, on occasion they have produced very large vessels. The Irish super trawler, *Veronica* (4,034-GRT), for example, was built by the Marstrandsverben yard in Sweden. The *Veronica* is one of the largest fishing vessels in Europe and demonstrates that Swedish shipyards can produce world-class fishing vessels.

6. International Agreements

The extension of 200-mile fishery zones in the mid-1970s prompted Sweden to establish its own 200-mile EEZ on January 1, 1978. This gave Sweden control over approximately 160,000 square kilometers of ocean, mostly in the Baltic where Sweden has a long tradition of fishing. It also required Sweden to negotiate maritime boundaries with its neighbors, including Finland, the Soviet Union, Poland, the German Democratic Republic, Denmark, and Norway. In addition to settling their maritime boundaries, the Swedish government also negotiated a series of bilateral agreements with its neighbors which permitted Swedish fishermen to fish in many of their traditional fishing grounds in exchange for foreign access to Swedish waters. Sweden and the Soviet Union, for example, negotiated an agreemnt to divide the "white zone" in the Baltic Sea in 1988. A joint protocol was signed on December 12, 1988, ending years of conflict. The dissolution of the Soviet Union and the reestablishment of Latvia, Estonia, and Lithuania as independent states has produced 4 separate bilateral fishery agreements in the area.[17] Sweden and Poland signed an agreement in 1993 allowing 20 Swedish vessels to fish for herring and sprat and 4 Swedish vessels to fish for salmon within the Polish 40-mile EEZ. No information was made available on what Polish fishermen received from Sweden.[18]

Fishing in the Baltic Sea is also coordinated by the International Council for the Exploration of the Sea, which establishes total allowable catches on an annual basis for its member states. Quotas for the Baltic Sea are set by the International Baltic Sea Commission in Warsaw. The Baltic Sea Fishery Commission reduced catch quotas for cod to 23,900 tons in 1992, which amounted to a reduction of nearly 41 percent. Sweden also negotiated access agreements to the North Sea with the European Community and with Norway. Access and fishing quotas in the Skagerak are established through annual tri-lateral talks with the EC, Sweden and Norway. Access to the Kattegat involves bilateral talks between Sweden and the European Community.

Sweden applied for membership in the European Community in July 1991, and negotiations began in the spring of 1993 with the goal of accession by January 1, 1995. Sweden is likely to face the prospect of reducing its fishing fleet when it joins the EC according to a 90-page report prepared by the EC.[19] Sweden would be bound by EC regulations once it joins the body and negotiations with other countries will thereafter be the responsibility of the EC. Swedish fishermen, however, will also be in a position to resume fishing in grounds belonging to the EC and will be able to take advantage of some agreements concluded by the EC with other countries. Thus, the future holds promise for a leaner fishing industry, but one that will have access to more fish.

7. Fleet Dispersal Plans

The Swedish high-seas fleet has grown modestly since 1988 when only 3 vessels were registered with more than 500-GRT. These vessels are mostly coastal craft that are built to withstand the rigors of fishing in northern waters and are not necessarily designed for fishing in distant-waters. The fleet now consists of 7 vessels. It is unlikely that these vessels will move to distant fishing grounds in the near future.

SOURCES

Annex to the Worldwide Fisheries Marketing Study: Prospects to 1985 (SWEDEN), Industry, Trade and Commerce, Fisheries and Oceans, Ottawa, November 1979.

Cole, Bruce. "Management rebuild Sweden's fishing industry," *National Fisherman*, July 1979.

Eurofish Report, various issues.

Fägerblad, Bö. Economic Section, U.S. Embassy, Stockholm, Sweden, fax dated August 11, 1993.

"*Fisheries in Sweden*," Fact Sheets on Sweden, The Swedish Institute, November 1978.

Svensk Fisk, Ekonomisk Forening cited in *European Supplies Bulletin, Annual Data, 1992*, Sea Fish Industry Authority, Edinburgh, 1993, p. 47.

Mulllins, Rose. *Sweden: A high fish consumption market*, The Centre for International Business Studies, Dalhousie University, Halifax, Nova Scotia, August 1978, p 6.

Office of Naval Intelligence, U.S. Navy.

Pownall, Peter. "Swedish fisheries showing signs of recovery after crisis in late 1960s and early 1970s," *Australian Fisheries*, June 1979, p. 11.

U.S. Embassy, Stockholm, various reports.

World Fishing, various reports.

Sweden

400 km
Kiruna
Tarnaby
Luleå
Umeå
Gulf of Bothnia
Sundsvall
Gavle
Uppsala
Karlstad
STOCKHOLM
Jönkoping
Goteborg
Gotland
Kattegat
Oland
Baltic Sea
Malmo
Karlskrona

Table 1.--SWEDEN. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	985	1	-	-	-	-	985	1
1976	1,765	2	-	-	2,508	1	4,273	3
1977	1,765	2	-	-	2,508	1	4,273	3
1978	1,765	2	-	-	2,508	1	4,273	3
1979	1,744	2	-	-	-	-	1,744	2
1980	1,744	2	1,181	1	-	-	2,925	3
1981	2,536	3	1,181	1	-	-	3,717	4
1982	1,777	2	1,193	1	-	-	2,970	3
1983	1,777	2	1,193	1	-	-	2,970	3
1984	1,777	2	1,193	1	-	-	2,970	3
1985	2,300	3	1,193	1	-	-	3,493	4
1986	2,683	3	1,193	1	-	-	3,876	4
1987	1,759	2	1,193	1	-	-	2,952	3
1988	2,275	3	-	-	-	-	2,275	3
1989	2,991	4	-	-	-	-	2,991	4
1990	3,502	5	-	-	-	-	3,502	5
1991	4,744	7	-	-	-	-	4,744	7
1992	5,419	8	-	-	-	-	5,419	8

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Table 2.--SWEDEN. Overview of the fishing industry, 1983-92

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	44,891	46,477	47,000E	47,000E	52,107	55,401	48,929	48,000E	48,000E	48,000E
Total fishing fleet (Number of vessels)	2,428	2,279	2,200E	2,200E	2,187	2,172	1,132	1,000E	1,000E	1,182
High-seas fleet (Number of vessels)	3	3	4	4	3	3	4	5	7	8
High-seas fleet (GRT)	2,970	2,970	3,493	3,876	2,952	2,275	2,991	3,502	4,744	5,419
Catch (Metric Tons)	269,472	282,206	239,615	215,080	214,538	250,993	257,819	260,124	245,016	320,000
Fishermen (Number)	4,900E	4,700E	4,678	5,000E	5,000E	5,000E	5,000E	5,000E	5,000E	5,000E

(E) = Estimate. Sources: FAO, *Yearbook of Fishery Statistics,* Rome, various years (catch statistics), *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, various years (high-seas fleet), and FAO, *Bulletin of Fishery Statistics, Fishery Fleet Staitstics*, Rome, various years.

Table 3.--SWEDEN. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric Tons								
Inland (FAO area 05)	10.2	10.0	3.0	3.2	4.0	5.2	6.0	5.9	5.5
Coastal[a] (Northeastern Atlantic and Baltic Sea, FAO area 27)	205.0	231.0	237.0	212.0	211.0	246.0	252.2	254.2	239.5
Total	215.2	241.0	240.0	215.2	215.0	251.2	258.2	260.1	245.0

Source: FAO, *Yearbook of Fishery Statistics*, various years.

[a] The distinction between "coastal" and "distant-water" can be misleading, since FAO area 27 stretches from eastern Greenland to the Baltic Sea and north to the Barents Sea.

ENDNOTES

1. Peter Pownall, "Swedish fisheries showing signs of recovery after crisis in late 1960s and early 1970s," *Australian Fisheries*, June 1979, p. 11.

2. 200-mile fishing zones established by the Faroe Islands, Greenland, Iceland, Norway, and the United Kingdom virtually closed the North Sea to Swedish fishermen. This resulted in many high-seas fishermen leaving the fishery and promoted the Swedish government to begin negotiations with its neighbors. Rose Mulllins, *Sweden: A high fish consumption market*, The Centre for International Business Studies, Dalhousie University, Halifax, Nova Scotia, August 1978, p 6.

3. Bruce Cole, "Management rebuild Sweden's fishing industry," *National Fisherman*, July 1979.

4.A harvest of over 300,000 tons is a considerable quantity that makes Swedish fisheries reasonably important when weighed among other nations.

5. Fish species in the Baltic include freshwater eels, salmonids, and some cod and herring. The Baltic and the Gulf of Bothnia contain brackish water and have low productivity. Growing industrial and agricultural pollution have reduced the productivity of these waters.

6. Svensk Fisk, Ekonomisk Forening cited in *European Supplies Bulletin, Annual Data, 1992*, Sea Fish Industry Authority, Edinburgh, 1993, p. 47.

7. Peter Pownall, "Swedish fisheries showing signs of recovery after crisis in late 1960s and early 1970s," *Australian Fisheries*, June 1979, p. 20.

8. This pattern was reported as far back and 1979 and may go back even further. Annex to the Worldwide Fisheries Marketing Study: Prospects to 1985 (SWEDEN), Industry, Trade and Commerce, Fisheries and Oceans, Ottawa, November 1979 and Bö Fägerblad, Economic Section, U.S. Embassy, Stockholm, Sweden, fax dated August 11, 1993.

9. "*Fisheries in Sweden*," Fact Sheets on Sweden, The Swedish Institute, November 1978.

10. Bo Fägerblad, Economic Section, U.S. Embassy, Stockholm, Sweden, fax dated August 11, 1993.

11. The U.S. Embassy in Stockholm reported that there were only 4 vessels of 500-GRT and over in 1992. Bo Fägerblad, Economic Section, U.S. Embassy, Stockholm, Sweden, fax dated August 11, 1993.

12. Office of Naval Intelligence, U.S. Navy.

13. "Sweden: Adapting to the time," *World Fishing,* November 1987.

14. Bo Fägerblad, Economic Section, U.S. Embassy, Stockholm, Sweden, fax dated August 11, 1993.

15. Bo Fägerblad, Economic Section, U.S. Embassy, Stockholm, Sweden, fax dated August 11, 1993.

16. "Sweden: Adapting to the time," *World Fishing,* November 1987.

17. The 4 agreements are between Sweden and Estonia, Latvia, Lithuania, and Russia.

18. "Sweden granted quotas in Polish EEZ," *Eurofish Report,* April 7, 1993, p. FS/4.

19. "EC Commission says "yes" to Swedish accession," *Eurofish Report*, August 13, 1992, p. BB/2.

3.9

TURKEY

Turkey has one stern trawler, the *Papila I.*, registering 997-Gross Registered Tons (GRT). The authors have no information about its operations. Turkey is not likely to begin high-seas fishing in distant-waters in the near future. It is, however, likely to fish in areas of the Black Sea and in the Mediterranean where it may come into conflict with other coastal states in the region.

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1. General Background

Turkish fishermen caught 365,000 tons of fish and shellfish in 1991, including 317,000 tons of marine fish and 47,200 tons of inland species. The main species caught were European anchovy (91,000 tons), Mediterranean horse mackerel (30,000 tons), mullets (28,000 tons), and whiting (23,000 tons). Carp, tuna, bluefish, sea bream, seabass, mussels, oysters, shrimp, and crayfish are other important species caught by Turkish fishermen. The Turkish catch has declined sharply from the high of 675,000 tons landed in 1988. This is the result of dramatic reductions in the harvest of European anchovy (*Engraulis encrasicolus*) since 1988. Most fish are consumed fresh, but some processing does take place, such as canning, smoking, or drying. There are 12,000 coastal villages settled on the Turkish coast and along the shores of inland lakes. Fishing is a family tradition employing father and son, typically using a small wooden boat. Turkish fisheries are geographically divided by region: Marmara Sea (927 kilometer coastline), Mediterranean (1,577 km coastline), Black Sea (1,695 km), Aegean Sea (2,805 km), the Istanbul Strait, and the Canakkale Strait and islands (1,329 km).[1] Turkish fisheries increased from 120,000 tons in 1966 to a high of 676,000 tons in 1988, before declining to an estimated 360,000 tons in 1992. Most of the Turkish marine harvest comes from the Black Sea. An overview of the Turkish fishing industry can be seen in tables 1-3.

2. Fleet Background

The capacity of the Turkish fishing fleet is, in the words of Turkish authorities, "at the lowest level among the Mediterranean countries."[2] The fishing fleet of approximately 8,000 vessels is mostly in the 1-GRT to 5-GRT range and most of these vessels are equipped with motors. The vessels do not have on-board freezing equipment.[3] None of the vessels are suitable for deep-sea fishing.[4] The Turkish fishing fleet included about 36,600 small, wooden vessels under 10 meters in 1984.[5] A number of new wooden vessels over 25 meters and built with steel hulls were added to the fleet in the early to mid-1980s. Turkey purchased a 997-GRT vessel in 1980 which appears to have remained active in it's fisheries through 1992. Another vessel, a 743-GRT craft, was active between 1984 and 1989. The authors have no further information about either vessel.

3. Modernization Programs

The Turkish fishing fleet underwent a modernization program in the mid-1980's, with most of the small (under 10 meters) wooden boats being replaced by larger (over 25 meters) wooden boats with steel hulls.[6] This may explain why the Turkish fishing fleet declined from 36,600 vessels in 1984 to only 8,000 vessels a few years later. In 1987, the Government of Turkey began studying a plan to begin high-seas fishing under action plan number 124.[7] A Turkish fishing company purchased the *Papila I.*, a 997-GRT vessel, in 1980 and operated this vessel through 1993. The vessel was built in 1979 and is listed as a factory trawler. A second vessel (743-GRT) operated between 1984 and 1987. The authors have no information about that vessel. In 1993, the Turkish fleet included 12 vessels, including the *Papila I.* The remaining vessels were between 100-GRT and 500-GRT.

4. Decommissioning Programs

The authors are not aware of any decommissioning programs in Turkey.

5. Shipyards

Turkish shipyards are able to build, maintain, and repair wooden vessels and small steel-hulled vessels.

6. International Agreements

Turkey borders on Greece, Bulgaria, Syria, Iraq, Iran and Armenia. It shares maritime boundaries with Bulgaria, Romania, Ukraine, Georgia and Russia in the Black Sea and Cyprus in the Mediterranean. Turkey established a 200-mile Exclusive Economic Zone (EEZ) in the Black Sea on December 5, 1986. Turkey signed an agreement with the USSR in 1990 that provided for scientific, economic, and technical cooperation. The agreement also permitted each country to harvest surplus fish in the territorial waters of the other country. The authors do not know if this agreement has been continued by the newly independent states in the region, but suspect that Ukraine and Georgia would be the most interested in negotiating fisheries accords with Turkey.

7. Fleet Dispersal Plans

The authors have no information regarding the operation of Turkey's fishing fleet.

SOURCES

"Expansion potential for Turkish fishing industry," *Eurofish Report*, April 13, 1989

OECD, *Review of Fisheries in OECD Member Countries*, Organization for Economic Co-Operation and Development, Paris, 1989.

"Project proposal for developing the production and export of fisheries," Department of Externally Financed Projects, General Directorate of Project and Implementation, *Ministry of Agriculture, Forestry, and Rural Affairs*, Ankara, August 1987

Wray, Tom. "Turkey stocks develop," *Fishing News International,* August 1988.

Table 1.--TURKEY. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	-	-	-	-	-	-	0	0
1976	-	-	-	-	-	-	0	0
1977	-	-	-	-	-	-	0	0
1978	-	-	-	-	-	-	0	0
1979	-	-	-	-	-	-	0	0
1980	997	1[a]	-	-	-	-	997	1
1981	997	1	-	-	-	-	997	1
1982	997	1	-	-	-	-	997	1
1983	997	1	-	-	-	-	997	1
1984	1,740	2	-	-	-	-	1,740	2
1985	1,740	2	-	-	-	-	1,740	2
1986	1,740	2	-	-	-	-	1,740	2
1987	1,740	2	-	-	-	-	1,740	2
1988	1,740	2	-	-	-	-	1,740	2
1989	1,740	2	-	-	-	-	1,740	2
1990	997	1	-	-	-	-	997	1
1991	997	1	-	-	-	-	997	1
1992	997	1	-	-	-	-	997	1

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[a] The *Papila I.* built in 1979 and purchased in 1980.

Table 2.--TURKEY. Overview of the fishing industry, 1983-92..

Fisheries sector	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of ships and fishermen, catch in metric tons, and vessel tonnage in gross registered tons									
Total fishing fleet (GRT)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total fishing fleet (Number of vessels)	7,672	7,691	8,604	8,661	NA	NA	NA	NA	NA	NA
High-seas fleet (Number of vessels)	1	2	2	2	2	2	2	1	1	1
High-seas fleet (GRT)	997	1,740	1,740	1,740	1,740	1,740	1,740	997	997	997
Catch (Metric Tons)	557,286	566,930	578,069	582,864	627,908	675,999	675,999	384,810	364,640	360,000E
Fishermen (Number)	NA	19,200	NA	NA	NA	NA	NA	NA	NA	NA

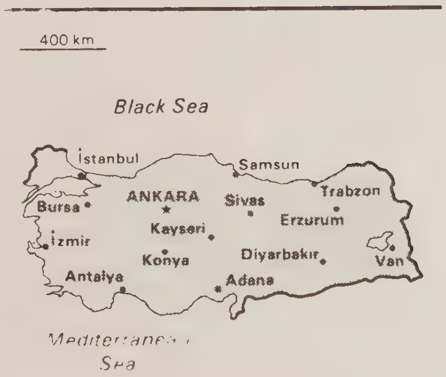
(E) = Estimate. Sources: Total fishing fleet: *Su Urünleri Istatistikleri*, Prime Ministry, State Institute of Statistics, Turkey, various years. Catch: FAO, *Yearbook of Fisheries Statistics*, Rome, various years.

Table 3.--TURKEY. Fisheries catch by FAO area, 1975, 1980, 1985-91

Area	1975	1980	1985	1986	1987	1988	1989	1990	1991
	Metric Tons								
Inland (FAO area 04)	16,680	32,225	45,469	43,269	44,964	52,464	46,337	41,663	47,216
Coastal waters (Mediterranean & Black Sea, FAO area 37)	184,790	387,321	532,599	539,595	582,944	623,535	410,777	343,147	317,424
Total	201,470	419,546	578,068	582,864	627,908	675,999	457,114	384,810	364,640

Source: FAO, *Yearbook of Fishery Statistics,* various years.

Turkey


400 km
Black Sea
İstanbul
Samsun
Trabzon
Bursa
ANKARA
Sivas
Erzurum
Kayseri
İzmir
Konya
Diyarbakır
Van
Antalya
Adana
Mediterranean
Sea

ENDNOTES

1. "Project proposal for developing the production and export of fisheries," Department of Externally Financed Projects, General Directorate of Project and Implementation, *Ministry of Agriculture, Forestry, and Rural Affairs*, Ankara, August 1987, p. 2.

2. "Project proposal for developing the production and export of fisheries," Department of Externally Financed Projects, General Directorate of Project and Implementation, *Ministry of Agriculture, Forestry, and Rural Affairs*, Ankara, August 1987, p. 2.

3. "Project proposal for developing the production and export of fisheries," Department of Externally Financed Projects, General Directorate of Project and Implementation, *Ministry of Agriculture, Forestry, and Rural Affairs*, Ankara, August 1987, p. 3.

4. "Expansion potential for Turkish fishing industry," *Eurofish Report*, April 13, 1989, p. SP/9. This statement conflicts with the statistical information in *Lloyd's Register* which shows that one vessel over 500-GRT is listed as being a Turkish fishing vessel.

5. Tom Wray, "Turkey stocks develop," *Fishing News International,* August 1988, p. 58.

6. Tom Wray, "Turkey stocks develop," *Fishing News International,* August 1988, p. 58.

7. OECD, *Review of Fisheries in OECD Member Countries*, Organization for Economic Co-Operation and Development, Paris, 1989, p. 186.

4

CANADA

Canada is not a participant in high-seas fisheries although it maintains an active interest in high-seas fishing due to its history as one of the world's richest fishing grounds. Foreign vessels have fished in waters off Canada since the fifteenth century, shipping home thousands of tons of Atlantic cod and other fish and shellfish. Canada and France have been involved in complex negotiations since both countries extended their Exclusive Economic Zones to 200 miles; the French islands of Saint Pierre and Miquelon both lie close to Newfoundland and the French have claimed rights to fish in these waters. Canada has also been required to deal with countries fishing in the Northwest Atlantic Fisheries Organization (NAFO) area off its coasts and with fishing fleets operating beyond Canada's 200-mile EEZ, but harvesting transboundary stocks of fish. Canadian fishery officials have also dealt with reflagged vessels (flying the flags of Panama and Honduras) appearing in their waters in recent years. Canada has been a strong supporter of responsible fishing.[1]

Canadian fishermen and government officials were able to manage their fisheries effectively for many years, but recently the catch of many key species has declined. An indefinite moratorium on the harvest of Atlantic cod and other groundfish off the coast of Newfoundland and Nova Scotia has had a major impact on the fishing industry of Atlantic Canada. The adverse economic conditions in Atlantic Canada prompted some fishermen and fishing companies to sell some of their assets in an effort to remain viable. In early 1993, *Fishing News International* reported that Faroese businessmen had gone to Canada to discuss the sale of 15 vessels. The authors have no information whether a sale was concluded.

ENDNOTES

1. John Crosby, Minister of Fisheries and Oceans, Canadian oral intervention, Responsible Fisheries Conference, Cancun, Mexico, May 7, 1992.

CANADIAN COUNTRY REPORT

4.1

CANADA

Increasing restrictions on Atlantic Canada's fisheries have hurt the operations of many fishermen and fishing companies in Canada. This may prompt some Canadian fishermen or companies to sell their vessels in an attempt to trim their operating costs or to leave Canadian fisheries. The Canadian Government will remain vigilant in monitoring foreign-flag vessels fishing inside their 200-mile EEZ and will argue for responsible fishing in international bodies dealing with the issue of transboundary stocks.

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1. General Background

Canada is the second largest country in the world, covering an area of slightly less than 10 million square kilometers (km). Canada's coastline of 244,000km ranks among the world's largest and opens onto what were once some of the world's richest fishing grounds. As recently as 1988, Canada harvested 1.6 million metric tons, with cod, haddock, hake, lobsters, scallops, salmon, and crabs as the major species. Nearly one-fifth of the catch, mostly cod, was exported to the United States. However, a combination of overfishing and a dramatic fall in North Atlantic ocean temperatures, have led to declines in the stocks of groundfish (Table 1).

In 1992, the Government of Canada imposed a two-year moratorium on the Newfoundland cod fishery, which has since been extended indefinitely and now covers other species of groundfish. This moratorium has led to unemployment for over 50,000 fishermen and plant workers in Atlantic Canada, causing a great deal of social dislocation. It has also called attention to accusations of overfishing just outside the Canadian EEZ. Thus, Canada has signed an agreement with the EC designed to regulate high-seas fishing, and has pushed for a United Nations convention that would give coastal states greater authority to restrict fishing just outside their EEZs.

2. Fleet Background

In 1992, the Canadian fishing fleet included 550 vessels registering over 100-GRT with a gross tonnage of 186,333-GRT. Most of these, 375 vessels, were in the "medium" range (e.g, 100-GRT to 499-GRT) and 175 vessels were classified as over 500 tons.[1] None of these vessels operated beyond Canada's 200-mile EEZ. The vast majority of Canadian fishing vessels are skipper-owned inshore day vessels less than 35 meters in length and under 25-GRT. These commercial vessels typically restrict their fishing to coastal areas off Greenland and Labrador, as well as in the North Atlantic. These inshore vessels provide fish to processing plants located throughout the four Atlantic provinces of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland. Vessels based in British Columbia, on the Canadian Pacific coast, rarely venture beyond Canadian waters in the Gulf of Alaska.

Canada introduced several factory freezer trawlers into its fleet during the late 1980's. This introduction caused a great deal of acrimonious debate between the federal and Newfoundland governments. Newfoundland Premier Brian Peckford warned that use of factory freezer trawlers would increase the northern cod harvest, hastening depletion of the stock and destroying jobs in onshore processing plants.[2] Provincial Fisheries Minister Tom Rideout also argued that fish frozen at sea was of an inferior quality to that purchased on land.[3] Fishing companies retorted that only factory freezer trawlers could produce large catches in quantities that would make exporting feasible. National Sea Products purchased the 75-meter *Cape North* from West Germany in 1986 for $6.5 million, which became its first freezer trawler. The *Cape North* makes two-month tours in the North Atlantic with crews of 60.[4]

In 1986, the "Pearse Report" on the Canadian fleet concluded that too many vessels remained in Canadian waters given the stocks available. The report led primarily to a reduction in the Pacific fleet (based in British Columbia) from 6,000 vessels in 1984 to 4,400 in 1986.[5] Since 1983, the Department of Fisheries and Oceans has attempted to reduce the Atlantic purse seine fleet.[6]

3. Modernization Programs

The Government of Canada bases its vessel replacement rules upon the overall measurement of vessel capacity in order to allow vessel owners greater replacement flexibility. Where fishing capacity exceeds available groundfish resources (largely anywhere in Canadian waters) vessel replacement rules are aimed at maintaining vessel and fleet capacity at existing levels, preventing further build-up of excess harvesting capacity. Vessels may be replaced with new ones of equal or smaller capacity.[7] While the Department of Fisheries and Oceans (DFO) regulates the entry of new vessels into the Canadian fishing fleet, it does not offer subsidies for vessel construction. The most significant fleet subsidy is the Fishing Vessel Insurance Program (FVIP), which provides below-market cost insurance coverage and benefits for all eligible Canadian fishing vessels, while maintaining full cost recovery on operations. During 1991-92, the Plan provided about $200 million in coverage to over 6,200 vessels.[8]

4. Decommissioning Programs

The Government introduced the Northern Cod Income Replacement Program in February, 1993. The program attempted to move away from transfer payments to unemployed fishery workers toward voluntary retirement and retraining. The Northern Cod Early Retirement Program encouraged cod fishermen and plant workers aged 55 to 64 to accept early retirement, which included the decommissioning of skipper-owned vessels. A special federal pension would apply to workers until they turned 65, when they could collect from the Canada Pension Plan. Fishermen under 55 had the option of surrendering their groundfish licenses to DFO for a lump-sum payment averaging $39,000. Younger fishermen and plant workers could enroll in federally sponsored retraining programs for non-fishing industries, or more intensive skills training for those intending to remain in fishing.

5. Shipyards

Canadian shipyards produce mainly inshore vessels for individual fishermen. Few high-seas vessels are built in Canada. Much of the business that Canadian shipyards receive comes from DFO contracts to build patrol vessels.

6. International Agreements

As a major coastal state, it is not surprising that Canada is party to a number of multilateral fishery agreements. Canada is a member of the NAFO and hosts its general secretariat in Dartmouth, Nova Scotia. NAFO plays an important role in Canadian international fisheries policy, since it has the authority to impose quotas upon foreign vessels outside the Canadian EEZ in the North Atlantic. Canada also participates actively in United Nations fishing-related activities; it is a party to conventions governing the use of driftnets, and is a leading advocate of a UN convention on highseas fishing.

While Canada offers quota allocations within its EEZ to foreign fleets for species which Canadian vessels decline to harvest, these allocations are not within the framework of bilateral fishing accords.[9] Canada nonetheless maintains bilateral accords with a handful of nations. In 1972, Canada and France negotiated an agreement setting out rules of access to Canadian waters for French fishermen based in St. Pierre et Miquelon, two French islands off the southern coast of Newfoundland. The Canada-United States Free Trade Agreement of 1989 provides for a special dispute settlement mechanism that the two parties have used on a number of occasions to settle fishery trade disputes. The Canada-U.S. fisheries relationship is extensively institutionalized, including the Pacific Salmon Commission, the International North Pacific Fisheries Commission, and the International Pacific Halibut Commission. The two countries also maintain a joint enforcement agreement under which one of the states will prosecute its own fishermen charged with violating the laws of the other partner.

7. Fleet Dispersal Plans

Given the crisis in the Atlantic fisheries, there will be very little if any room for the addition of new vessels to the Canadian fleet, especially when Canada has been doing its utmost to force foreign vessels further from its shores. The overall depressed state of North Atlantic stocks makes expansion into this area very unlikely. Given the tremendous losses in jobs in Atlantic Canada (unemployment levels approach 30% in Newfoundland), many vessel owners see themselves as pushed to the point of desperation. The sale of Canadian vessels to foreign owners is a real possibility.

SOURCES

"Canadian Allocations to Foreign Fleets Inside Canada's 200-Mile Zone," Fisheries and Oceans, Canada *Backgrounder*, March 1993.

"Canada plans early cuts in Atlantic purse seiner fleet," *Fishing News International*, September 1983, p. 56.

"DFO Appoints General Manager to Fishing Vessel Insurance Plan," *News Release*, Fisheries and Oceans Canada, December 23, 1992.

"Table 1: Size of Trawlers and Fishing Vessels," *Statistical Tables*, June 1992, p. 27.

"Hard work and old movies," *Halifax Chronicle-Herald*, September 2, 1987.

"Rideout Reaffirms Stand Against Factory Freezer Trawlers," *Atlantic Fishermen*, January 1, 1988.

"Still too many boats in Canadian fishery," *Fishing News International*, December 1986, p. 52.

U.S. Consulate General, Halifax, Nova Scotia, various messages.

"Vessel Replacement Rules for Atlantic Inshore Fishery," *News Release*, Fisheries and Oceans Canada, June 23, 1989.

Table 1. Atlantic Canada. Groundfish catch, 1966-92.

Year	Cod	Haddock	Redfish	Halibut	Flatfish, small, nes	Turbot	Atlantic Pollock	Hake	Cusk	Marine catfish	Other	Total
	Metric tons											
1966	306,492	61,409	83,044	2,814	105,614	13,952	18,822	15,179	-	-	6,396	613,722
1967	283,529	55,929	85,864	2,620	107,350	14,967	17,823	13,883	-	-	7,873	589,838
1968	323,070	49,595	97,444	2,449	106,628	12,913	18,247	10,515	-	-	7,649	628,510
1969	294,094	44,246	96,706	2,206	123,759	12,459	16,075	10,590	-	-	7,547	607,682
1970	262,781	26,931	108,513	2,116	135,562	11,838	10,888	13,209	-	-	7,185	579,023
1971	244,480	29,174	112,776	2,012	128,101	10,375	12,035	20,656	-	-	9,032	568,641
1972	219,146	17,206	109,917	1,691	116,980	9,781	18,283	21,657	-	-	6,798	521,459
1973	176,636	18,210	158,442	1,674	122,149	7,654	27,226	21,742	-	-	6,193	539,926
1974	156,806	14,800	87,693	1,480	98,756	6,880	25,188	19,373	-	-	6,812	417,788
1975	145,917	19,417	107,916	1,358	91,992	9,364	26,640	10,031	-	-	8,257[a]	420,892
1976	193,550	19,326	89,654	1,322	110,373	11,515	23,238	13,797	-	-	6,891	469,666
1977	237,622	26,832	66,594	1,498	111,081	22,908	25,948	11,635	3,364[b]	3,930[c]	3,943	515,355

[a] Information in the fax was garbled and some numbers were placed under the "other" category.

[b] Hake and cusk were combined under hake prior to 1977.

[c] Marine catfish was presumably included under other fish prior to this date.

1978	296,859	43,034	77,065	1,684	109,176	31,727	27,534	11,179	5,312	3,307	5,175	612,052
1979	377,986	34,599	80,627	1,925	110,186	40,394	31,227	12,984	4,911	4,067	3,648	702,554
1980	422,092	54,262	48,982	2,168	104,887	39,567	36,751	18,269	4,554	4,993	3,259	739,784
1981	439,649	57,024	72,066	1,933	105,388	27,863	40,618	19,554	5,965	5,395	4,111	779,566
1982	517,352	46,403	66,023	2,559	93,665	23,591	38,576	16,881	6,290	5,961	3,026	820,327
1983	509,052	39,777	58,253	2,499	76,963	20,210	33,843	13,132	4,365	6,037	2,000	766,131
1984	474,925	32,654	65,110	3,155	79,990	21,745	35,217	13,993	3,126	3,597	1,533	735,045
1985	480,471	37,095	71,388	3,926	89,113	17,710	44,832	15,147	2,376	3,672	2,353	768,083
1986	474,478	44,729	79,489	3,703	89,282	18,115	49,767	16,872	2,109	3,537	3,468	785,549
1987	458,204	27,511	80,645	2,483	90,066	28,378	49,510	19,840	3,954	2,990	3,568	767,149
1988	467,951	30,954	78,112	2,569	73,918	16,188	44,353	12,813	2,917	2,278	2,045	734,098
1989	422,471	26,022	76,126	2,318	70,218	16,676	44,464	14,228	3,403	1,994	2,414	680,334
1990	395,329	22,147	81,412	2,415	63,657	19,602	38,385	15,187	3,543	1,536	2,948	646,161
1991	308,325	21,949	92,501	2,034	64,226	20,143	40,724	63,892	4,417	1,385	3,625	623,221
1992	184,952	21,863	94,867	1,554	47,910	21,581	33,989	37,963	5,034	1,262	3,377	454,352

SOURCE: Department of Fisheries and Oceans, fax message, September 3, 1993.

ENDNOTES

1. "Table 12: Size of Trawlers and Fishing Vessels," *Statistical Tables,* June 1992, p. 27.

2. "Factory Freezer Trawler Approval: Peckford vs. Ottawa--Again," U.S. Consulate, Halifax, November 18, 1985.

3. "Rideout Reaffirms Stand Against Factory Freezer Trawlers," *Atlantic Fishermen*, January 1, 1988.

4. "Hard work and old movies," *Halifax Chronicle-Herald*, September 2, 1987.

5. "Still too many boats in Canadian fishery," *Fishing News International*, December 1986, p. 52.

4. "Canada plans early cuts in Atlantic purse seiner fleet," *Fishing News International*, September 1983, p. 56.

7. "Vessel Replacement Rules for Atlantic Inshore Fishery," *News Release*, Fisheries and Oceans Canada, June 23, 1989.

8. "DFO Appoints General Manager to Fishing Vessel Insurance Plan," *News Release*, Fisheries and Oceans Canada, December 23, 1992.

9. "Canadian Allocations to Foreign Fleets Inside Canada's 200-Mile Zone," Fisheries and Oceans, Canada *Backgrounder*, March 1993.

Canada

1200 km
Arctic Ocean
Baffin Bay
Dawson
Davis Strait
Whitehorse
Labrador Sea
Hudson Bay
Churchill
Vancouver
Calgary
Winnipeg
Quebec
Montreal
Halifax
Lake Superior
OTTAWA
Lake Huron
Toronto

SUMMARY

5

FUTURE OPERATIONS

The shift in West European high-seas fleets will involve mostly the European Community and the Nordic, Canadian, or Mediterranean fleets only minimally. The EC high-seas fleet will shift slowly and predictably between 1994 and 1996. Morocco will remain critical to the EC, especially Spain. Africa will also be an important area for EC fishermen and fishing is expected to remain more or less constant, since the EC renegotiated its agreements with most African countries in 1993 and these agreements will remain in place until 1996. Negotiations with Namibia were begun in September 1993 and may allow EC vessels to resume fishing in 1994. No major changes are expected in the Indian Ocean in the next few years. Argentina must ratify the agreement reached allowing EC vessels to fish in Argentina's waters; this could open the door for 70 EC vessels. Some EC vessels may seek to fish in the Pacific Ocean in the next few years, but this remains speculative.

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I. MAJOR FACTORS

The future expansion of European high-seas fishing will be influenced by a number of critical factors. These issues can be summarized as follows:

- Much of the shift will be dependent upon the success (or failure) of the EC in concluding an agreement with Namibia and ratifying the agreement with Argentina.

- The Nordic countries are unlikely to join their EC neighbors in seeking opportunities in distant waters and these countries are expected to remain in the North Atlantic fishing grounds.

- Groundfish stocks from Canada to western Greenland are not expected to recover before the end of the decade.

- EC fishing vessels are likely to continue fishing in the NAFO area, despite depleted stocks, in order to maintain a continuous historic presence in the fishery.

- EC negotiators will focus their efforts on Latin America in the next few years, and could succeed in opening doors to Chile and Peru. This remains speculative.

- Russia might allow Germany, the Netherlands, or Norway access to their fish resources in the North Pacific in exchange for access to lucrative European markets, currency, or technology.

- The EC fleet will be reduced in size by 184,000-GRT between 1993-96 as a result of the Multi-annual Guidance Program. This will reduce the size of the EC high-seas fleet, but details are not available.

- The Nordic fleets will remain in the North Atlantic. Few vessels will seek opportunities in distant waters, but some vessels may be sold to fishermen in distant countries or a few may seek joint venture opportunities in distant-waters.

- Two Mediterranean countries, Cyprus and Malta, are becoming centers for reflagged vessels.

- Canadian fishermen or companies are unlikely to seek opportunities in distant waters, but may sell some of their vessels.

II. WILDCARDS

There are always unexpected developments which could alter fishing patterns in Europe. The following is a list of events that would have an impact on high-seas fishing by European fleets:

- The collapse of more North Atlantic stocks.

- The sudden recovery of cod, haddock or saithe stocks in the North Atlantic.

- The imposition of stricter rules on fishing in the North Atlantic by the EC or other countries.

- An increase in fuel costs.

- The EC fails to negotiate an agreement with Namibia or Argentina does not ratify the agreement with the EC.[1]

III. FUTURE OPERATIONS[2]

The authors projected the operations of the EC and non-EC fleets based on FAO catch data for 1991 (figures 12-14). These projections are reasonably accurate for 1994-95, but are less certain for 1996. For example, most of the EC's bilateral agreements with African countries were renewed in 1993. Thus, it is safe to assume that fishing quotas in West Africa will not be changed until 1996. The idea that European vessels will fish in the Pacific Ocean by 1996 is speculation. There is, obviously, no way that the authors can accurately predict future catch rates and fishing grounds given the complex nature of international fisheries, even for a few years. *Readers are cautioned that our projections are only educated "guesses" that can easily be wrong.*

A. 1994

Northwestern Atlantic:
The failure of groundfish stocks off Canada is expected to reduce fishing by Spain, Portugal, and France in waters of the Northwestern Atlantic Fisheries Organization (NAFO) in 1994.[3] The Canadians have demonstrated that cod and other stocks have been seriously overfished and the EC has recognized this situation. Greenland also has serious problems with groundfish stocks and this will affect fishing by Dutch, German, and others.

Eastern Central Atlantic:
Fishing off West Africa is expected to remain unchanged between 1993 and 1995. The reason is that bilateral agreements with West African nations were renegotiated in 1993 and will remain in place until 1996. Thus, catches will remain mostly unchanged for most of the EC countries now fishing in the region. This assumes no major biological fluctuations that would affect landings.

Southeastern Atlantic:
Negotiations between the EC and Namibia are scheduled to begin in September 1993. The authors project (perhaps prematurely) that an agreement with **Namibia** will be reached in 1994 and that some Spanish and Portuguese vessels may be able to resume fishing for Cape hake (*Merluccius capensis*) in these waters; the initial catches will be modest, but will increase in the future.

Southwestern Atlantic:
Fishing in the waters around the **Falklands** will remain mostly unchanged, with most of the catch of cephalopodes going to Spanish high-seas vessels (about 90,000 tons). A few Portuguese (3,000 tons) and Italian vessels (3,000 tons) may fish under licenses issued by U.K. authorities. In addition, the vanguard of the EC fleet is projected to arrive in **Argentina** during 1994 and fishing will begin, albeit at reduced levels. A few Portuguese or Greek vessels are expected to benefit from the agreement. The French may send one or two large stern trawlers to the region to "test the waters" in 1994 or 1995[4] Some of the large pelagic vessels from the Netherlands or Germany could be attracted to the region if catches are good and problems are minimal.[5]

Indian Ocean:
Spanish and French tuna vessels will continue to fish for tuna in the Indian Ocean while Italian vessels fish for a variety of other marine species in the region (see Figure 15).

B. 1995

Northwestern Atlantic:
The groundfish resources of the NAFO area, from Canada to Greenland, are projected to remain depleted; few vessels will find opportunities to expand their catch in the northwestern Atlantic in 1995.

Eastern Central Atlantic:
Fishing off West Africa, from Morocco to Sao Tome and Principe will remain stable. No major increase or decrease is anticipated until the African countries renegotiate their bilateral agreements with the EC in 1996.

Southeastern Atlantic:
Fishing from Angola to Namibia and South Africa, is expected to increase as Spanish, French, and Portuguese vessels resume their former effort off Namibia. Modest fishing off South Africa will continue under agreement.[6]

Southwestern Atlantic:
The waters off the Falklands and Argentina, are expected to yield more fish to EC vessels, especially from Spain, Portugal, the UK, and Italy. The full complement of 70 EC vessels should be in operation in Argentina's waters and harvests should increase. However, the EC-Argentina agreement requires that half of the EC fleet (35 vessels) become Argentina-flag vessels; thus the catch of those vessels will be listed by Argentina and not the EC. Dutch or German high-seas may start "klondiking" fish from EC or local vessels.[7]

Indian Ocean:
Fishing in the Indian Ocean will increase slightly as newer, more efficient vessels are added to the French and Spanish tuna fleets in the region. Italian vessels are expected to continue to fish for non-tuna species in the region, but may be increasingly attracted by the idea of fishing for these highly migratory species in these waters (Figure 16).

C. 1996

Northwestern Atlantic:
Groundfish resources in the NAFO region, between Canada and Western Greenland, are projected to remain poor during 1996 (and possibly through 1998, despite drastic efforts to rebuild stocks). Thus, this area should not produce an increase in fishing effort and catches in 1996.

Eastern Central Atlantic:
The catch of EC vessels off West Africa will see a modest decline, as Morocco trims the size of the Spanish fleet of day boats fishing off its coast in 1996 as they have done in the past. Many other African countries will impose greater financial requirements on the EC for continued access as most bilateral agreements are due for renewal in 1996. The EC is expected to continue to maintain ties with most African nations from Morocco south to Sao Tome and Principe and will continue to pay for access to African fishing grounds.

Southeastern Atlantic:
Fishing in the waters off Namibia, will plateau as EC vessels reach the maximum levels allowed under EC-Namibian agreements, probably in the area of 100,000 tons of cape hake. It is possible that Dutch or German-flag high-seas vessels[8] may be attracted to pelagic fish stocks off southern Africa or may be able to klondike fish from Angolan, Namibian, South African, or Mozamibican fishermen for sale elsewhere in Africa.

Southwestern Atlantic:
Fishing off Argentina, will plateau as the 35 EC vessels permitted to fish in the region operate at full capacity. If the agreement proves profitable to both EC and Argentine fishing companies, then new fish may be added to the list of target species or quotas might be increased. Fishing off the Falklands is likely to be regulated at 1993 levels by UK authorities.

Indian Ocean:
Catches of tuna in the Indian Ocean may reach a peak as more and more Spanish and French tuna vessels fish for this species. Italian investors may decide to send tuna vessels into the Indian Ocean to obtain sources of tuna.[9]

Western Central Pacific:
Reduced catches or increased competition in the Indian Ocean might push Spanish and French tuna vessels into the Pacific Ocean in search of tuna. The French would likely be the first,[10] operating from bases in New Caledonia or French Polynesia.[11]

Southwestern Pacific:
It is possible that some UK fishing vessels may feel the pinch of increasing EC restrictions on fishing in the North Atlantic and seek new opportunities in distant-waters. They are likely to seek out joint venture possibilities in Australia or New Zealand where the language and culture are similar. Norwegian vessels, which have been fishing in these waters, may also demonstrate that these waters are worth fishing.[12]

Southeastern Pacific:
It is possible that EC negotiators will open doors to fishing off Chile and Peru to Spanish, Dutch, or German high-seas stern trawlers or purse-seiners. The vessels might be attracted by large schools of jack mackerel which are found within 200-miles of the coast as well as beyond 200-miles. Jack mackerel are not normally attractive to West Europeans, but there are several Dutch and German high-seas vessels[13] ideally suited to fish for these species. EC negotiators have shown some interest in these waters, but overtures have been rejected by Latin American authorities in the region. Still, if the Argentine agreement proves profitable, it is likely that similar agreements might possibly be reached with officials in Chile and Peru. Access to Chilean or Peruvian waters, obviously, *is speculative and may never be realized.*

Northwestern Pacific:
Finally, it is possible that Danish, Dutch, German, or Norwegian high-seas stern trawlers and purse-seiners might be invited to fish off the coast of Russia. It is only a matter of time before the Russians realize that high-quality products generate high income and that joint ventures with Europe's most efficient seafood companies could show them how to produce the best seafood products, or show them how to gain access to the lucrative European seafood market. Alternatively, access to some of their species could help earn them hard currency. The Russians might, for example, offer access to excess quantities of pelagic species or Alaska pollack, or Pacific cod, which the Europeans could process for sale in European markets. The Russians might even offer limited access to Pacific salmon with the expectation that the Europeans could produce high-value products for sale on world markets (Figure 17). *All of this is highly speculative and might never come to fruition.*

IV. REFLAGGING

The likelihood of West European fishermen selling, converting, scrapping, or reflagging their vessels is a real possibility if EC negotiators fail to win access to Namibian waters or if Argentina fails to ratify the agreement with the EC. The fate of between 70 and 170 Spanish and Portuguese vessels (possibly more) remains in the balance. EC vessels from other countries will be decommissioned under the MAGP. Finally, it is possible that some EC vessel owners will find restrictions on fishing in the North Sea too costly. Many captains or owners of vessels could decommission their vessels and some may reflag their vessels and seek opportunities to fish elsewhere where restrictions are different.

Reflagged European vessels are likely to target **cod, haddock, saithe,** and other **whitefish** or will seek **herring, mackerel, horse mackerel**, or **hake** species. They will fish anywhere in the world where these species can be found. It is always possible that individual fishermen may seek to reflag their vessel in an attempt to circumvent local or international laws protecting anything from **Atlantic salmon** to **bluefin tuna**.

It is unlikely that many EC vessels will reflag their vessels to fish for **tuna**, in the *Atlantic or Indian Ocean* because opportunities for fishing tuna in these waters already exist. However, some Spanish vessels have been reflagged allowing them to fish for tuna in the *Pacific Ocean*. It is unlikely that any vessels will reflag to fish **blue whiting**, since that species is found in abundance and ample quotas for that species exists in the North Atlantic. It is possible that some fishermen might reflag their vessels to fish for **shellfish (shrimp, crab**, or **lobster**), since most shellfish are high-value species caught well inside coastal waters. Reflagging would allow some fishermen to fish well inside coastal waters of developing nations where stocks are abundant, but where fisheries are still relatively undeveloped..

The authors do not expect Canadian fishermen to reflag their vessels, but the severe economic dislocations being suffered in Atlantic Canada may prove too great; some fishermen might be attracted to reflagging their vessels, but this is considered highly unlikely.

In summary, reflagging will continue, and could increase considerable between 1994 and 1996. This possibility will likely become a serious probability if the EC fails to gain access to waters in southern Africa and Latin America in 1994.

ENDNOTES

1. The EC ratified the agreement with Argentina in September 1993.

2. Forcasting the future, obviously, is based on guesses and speculation. In some cases, the authors are reasonably confident of their projections. In other cases, particularly for 1996, the projections are based on speculation; these events could take place, but there are few assurances to back up these assumptions.

3. Despite general acceptance of the low level of resources off Atlantic Canada, EC vessels are expected to continue fishing in the area to maintain a historic fishing effort in the region. This is necessary if the EC wishes to claim or justify future quotas in the area when stocks recover.

4. The *Commandant Gué*, one of the larger (1,596-GRT) trawlers remaining in the French fishing fleet, returned to France in 1992-93, after an unsuccessful venture in Vietnamese waters. The vessel would be a logical candidate to fish in Argentina's waters under the EC umbrella. The *Capitaine Pleven II* (2,435-GRT) would be another vessel able to fish in Argentina's waters.

5. The German-flag *Jan Maria, Dirk Dirk*, and *Gerda Maria* and the Dutch-flag *Dirk Diederick* and *Cornelis Vrolijk Fzn.*would be especially suitable.

6. Portugal and Spain both have bilateral fishing agreements with the Republic of South Africa.

7. The German-flag *Jan Maria, Dirk Dirk*, and *Gerda Maria* and the Dutch-flag *Dirk Diederick* and *Cornelis Vrolijk Fzn.*would be especially suitable.

8. The German-flag *Jan Maria, Dirk Dirk*, and *Gerda Maria* and the Dutch-flag *Dirk Diederick* and *Cornelis Vrolijk Fzn.*would be especially suitable.

9. This is speculation and is not based on substantive information or data.

10 The *Isabel Tuna,* flying the Cypiot flag began fishing in the Eastern Tropical Pacific in 1992 and a Spanish tuna purse seiner, the *Monteclaro*, sank in the area on July 14, 1993. It is always possible that one or two individual vessels may fish for tuna on an *ad hoc* basis. The authors, in this instance, are referrring to a permanent base involving more than one or two vessels.

11. The key word is "might". It is also possible that this will not occur.

12. Again, this is speculation by the authors.

13. The German-flag *Jan Maria, Dirk Dirk*, and *Gerda Maria* and the Dutch-flag *Dirk Diederick* and *Cornelis Vrolijk Fzn.*would be especially suitable.

APPENDIX SECTION

PART I. STATISTICAL TABLES

A. GENERAL STATISTICS

APPENDIX SECTION

1. General fleet statistics

Appendix 1.--Western Europe. High-seas fishing fleet versus total fishing fleet, 1975-92.

Year	High-seas Vessels		Total High-seas Fleet	Regional Fleets		Total Fleet (estimated)
	EC	Non-EC		EC	Non-EC	
	Number of Vessels					
1975	406	392	798	52,539	57,036E	109,575
1976	390	416	806	52,606	53,336E	105,942
1977	367	416	783	52,357	54,354E	106,711
1978	342	436	778	52,613	55,864E	108,477
1979	322	435	757	51,893	58,455E	110,348
1980	309	419	728	50,826	59,559E	110,385
1981	295[a]	388	683	81,578	32,037E	113,615
1982	279	374	653	82,667	30,379E	113,046
1983	260	367	627	83,229	30,176E	113,405
1984	260	374	634	91,602	29,526E	121,128
1985	255	376	631	93,125	27,933E	121,058
1986	458[b]	172	630	85,919	27,115E	113,034
1987	518	166	684	97,943	26,124E	124,067
1988	584	189	773	96,662	24,894E	121,556
1989	607	197	804	95,211	21,385E	116,596
1990	623	203	826	91,209	20,122E	111,331
1991	648	209	857	96,173	20,951E	117,124
1992	591	213	804	90,000E	19,000E	109,000

Sources: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years (high-seas fleet only); *Fishery Fleet Statistics,* Bulletin of Fishery Statistics, Food and Agriculture Organization of the United Nations, Rome, various years; *Annual Report on German Fisheries*, Federal Ministry of Food, Agriculture and Forestry, Bonn, various years; *Årsberetning vedkommende Norges Fiskerier*, Fiskeridireccktoratet, Fiskeflåten, various issues, *L'évolution du secteur belge de la pêche maritime*, Conseil Central de l'Economie, Commission Consultative Spéciale de la Pêche, Bruxelles, various years; *Sea Fisheries Statistical Tables,* Government Statistical Service, London, various years. (E) = Estimate.

[a] Greece joined the EC on January 1, 1981.

[b] Portugal and Spain joined the EC on January 1, 1986.

Appendix 2.--Western Europe. Tonnage of high-seas fishing fleet versus total fishing fleet, 1975-92.

Year	High-seas Vessels		Total High-seas Fleet	Regional Fleets		Total Fleet (estimated)
	EC	Non-EC		EC	Non-EC	
	Gross Registered Tons					
1975	426,461	404,716	831,177	1,196,624	1,509,440	2,706,064
1976	392,446	431,252	823,698	1,188,878	1,619,659	2,808,537
1977	389,624	434,630	824,254	1,165,496	1,549,149E	2,714,645
1978	366,058	349,200	715,258	1,153,254	1,565,767E	2,719,021
1979	344,274	441,728	786,002	1,092,701	1,697,414	2,790,115
1980	331,040	421,947	752,987	1,087,586	1,713,220	2,800,806
1981[c]	319,446	395,300	714,746	2,140,995	566,210E	2,707,205
1982	287,969	386,260	674,229	2,118,966	516,575E	2,635,541
1983	262,469	378,969	641,438	2,098,895	506,497E	2,605,392
1984	255,160	386,204	641,364	2,081,182	514,830	2,596,012
1985	241,520	389,110	630,630	2,055,355E	519,237E	2,574,592
1986[d]	465,167	152,922	618,089	1,985,861E	588,893E	2,574,754
1987	532,580	155,501	688,081	2,056,117E	702,774	2,758,891
1988	614,683	187,081	801,764	2,020,371E	542,199	2,562,570
1989	650,488	203,620	854,108	1,984,634E	532,663	2,517,297
1990	669,643	209,252	878,895	1,997,934E	530,525E	2,528,459
1991	718,416	214,663	933,079	1,994,030E	508,289E	2,502,319
1992	645,860	222,635	868,495	1,900,000E	500,000E	2,400,000

Sources: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years (high-seas fleet only); *Fishery Fleet Statistics,* Bulletin of Fishery Statistics, Food and Agriculture Organization of the United Nations, Rome, various years; *Annual Report on German Fisheries*, Federal Ministry of Food, Agriculture and Forestry, Bonn, various years; *Årsberetning vedkommende Norges Fiskerier*, Fiskeridireccktoratet, Fiskeflåten, various issues, *L'évolution du secteur belge de la pêche maritime*, Conseil Central de l'Economie, Commission Consultative Spêciale de la Pêche, Bruxelles, various years; *Sea Fisheries Statistical Tables,* Government Statistical Service, London, various years. (E) = Estimate.

[c] Greece joined the EC on January 1, 1981.

[d] Portugal and Spain joined the EC on January 1, 1986.

Appendix 3.--EC countries. Number of high-seas fishing vessels, 1975-92.

Year	European Community Member States[e]											Total
	Belgium	Denmark	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain	U.K.	
	Number of Vessels											
1975	1	9	100	81	34	-	60	12	72	172	143	684
1976	1	11	106	77	33	1	58	11	74	187	125	684
1977	1	12	103	75	30	2	55	10	77	187	109	661
1978	1	13	95	73	29	2	52	12	77	191	94	639
1979	1	13	91	68	28	2	50	14	79	179	83	608
1980	1	13	93	56	27	2	49	18	78	166	77	580
1981	1	18	86	44	27	4	40	21	79	157	54	531
1982	1	18	85	37	23	4	39	30	77	144	42	500
1983	1	17	88	32	19	5	36	29	77	141	33	478
1984	1	20	88	32	15	6	34	36	75	142	28	477
1985	1	28	91	26	15	6	32	33	74	143	23	472
1986	1	36	85	17	13	6	30	33	74	145	18	458
1987	1	71[f]	90	17	12	7	31	27	74	168	20	518
1988	1	90	87	14	16	8	31	36	72	188	41	584
1989	1	92	89	15	14	7	30	38	69	211	41	607
1990	1	94	92	16	17	7	30	41	69	216	40	623
1991	-	86	92	56	17	7	29	41	62	219	39	648
1992	-	83	90	28	17	8	27	39	54	204	41	591

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, UK, various years.

[e] Greece joined the EC in 1981 while Portugal and Spain joined in 1986.

[f] Includes Faroese fishing vessels beginning in 1987.

Appendix 4.--EC countries. Tonnage of high-seas fishing vessels, 1975-92.

Year	European Community Member States[a]											Total
	Belgium	Denmark	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain	U.K.	
	Gross Rgistered Tons											
1975	555	7,840	95,756	133,728	33,056	0	57,046	5,672	95,789	184,447	125,864	739,753
1976	555	8,340	96,640	107,644	32,430	1,921	57,513	4,503	98,493	203,472	115,330	726,841
1977	555	9,190	92,995	125,123	29,362	3,031	54,872	3,943	103,112	205,162	99,915	727,260
1978	555	9,911	85,977	120,259	27,928	3,031	52,203	6,318	103,140	206,332	87,804	703,458
1979	555	10,251	78,057	114,690	27,466	3,031	50,938	6,525	104,648	186,998	80,227	663,386
1980	555	10,251	80,134	103,606	24,296	3,031	49,295	9,095	101,582	175,120	75,073	632,038
1981	555	15,585	75,054	90,392	24,376	2,264	41,368	11,751	102,208	164,934	58,101	586,588
1982	555	15,659	74,171	76,928	19,248	2,130	41,455	16,197	98,133	156,490	41,626	542,592
1983	555	14,615	76,120	64,968	15,776	2,880	37,959	16,233	97,762	153,968	33,363	514,199
1984	555	18,795	76,712	65,574	12,714	3,426	32,894	15,142	95,746	150,971	29,348	501,877
1985	555	26,823	79,079	51,148	12,274	3,426	30,958	12,842	94,560	154,664	24,415	490,744
1986	555	36,873	75,041	29,119	10,183	4,562	29,685	12,277	94,866	153,645	18,361	465,167
1987	555	76,772	78,457	28,636	10,653	6,442	31,332	8,228	91,725	178,901	20,879	532,580
1988	555	99,817	75,107	24,706	18,718	14,113	31,332	12,508	90,338	204,192	43,297	614,683
1989	555	104,292	76,523	31,197	14,724	10,071	30,090	15,143	87,081	238,170	42,642	650,488
1990	555	109,030	81,334	32,197	19,120	10,052	30,090	15,858	86,844	242,742	41,821	669,643
1991	-	100,163	80,956	106,990	18,266	10,070	29,475	14,764	77,502	241,878	38,352	718,416
1992	-	93,856	80,069	57,659	17,256	11,968	26,236	14,762	67,675	234,631	41,748	645,860

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, UK, various years.

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[a] Greece joined the EC in 1981 while Portugal and Spain joined in 1986.

Appendix 5.--Non-EC countries. Number of high-seas fishing vessels, 1975-92.

Year	Non-European Community states						Total
	Faroe Islands	Finland	Iceland	Norway	Sweden	Other[h]	
	Number of Vessels						
1975	13	2	26	72	1	0	114
1976	15	1	25	78	3	0	122
1977	15	1	24	79	3	0	122
1978	16	1	24	92	3	3	139
1979	15	1	27	101	2	3	149
1980	16	1	28	98	3	2	148
1981	17	1	30	97	4	3	152
1982	16	-	30	100	3	4	153
1983	16	-	28	99	3	3	149
1984	20	-	28	102	3	4	157
1985	22	-	29	98	4	6	159
1986	24	-	30	109	4	5	172
1987	-[i]	-	33	124	3	6	166
1988	-	-	42	138	3	6	189
1989	-	-	48	141	4	4	197
1990	-	-	52	143	5	3	203
1991	-	-	57	142	7	3	209
1992	-	-	61	139	8	5	213

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, UK, various years.

[h] Includes Cyprus, Malta, and Turkey.

[i] Included under Denmark beginning in 1987.

Appendix 6.--Non-EC countries. Tonnage of high-seas fishing vessels, 1975-92.

Year	Non-European Community states						Total
	Faroe Islands	**Finland**	**Iceland**	**Norway**	**Sweden**	**Other[j]**	
	Tonnage of fleet						
1975	9,745	1,880	22,904	55,910	985	0	91,424
1976	11,321	581	21,254	59,428	4,273	0	96,857
1977	11,305	581	20,570	60,265	4,273	0	96,994
1978	12,247	581	20,071	72,225	4,273	2,403	111,800
1979	11,339	581	22,041	83,714	1,744	3,197	122,616
1980	11,908	581	22,581	81,387	2,925	1,567	120,949
1981	14,404	581	23,687	81,618	3,717	4,151	128,158
1982	13,666	-	23,735	86,117	2,970	5,149	131,637
1983	13,670	-	22,420	84,028	2,970	4,151	127,239
1984	19,863	-	22,420	89,340	2,970	4,894	139,487
1985	23,374	-	23,002	81,824	3,493	8,193	139,886
1986	24,824	-	23,486	94,844	3,876	5,892	152,922
1987	-	-	26,035	119,089	2,952	7,425	155,501
1988	-	-	32,383	144,998	2,275	7,425	187,081
1989	-	-	36,766	159,592	2,991	4,271	203,620
1990	-	-	42,895	159,341	3,502	3,514	209,252
1991	-	-	47,016	159,171	4,744	3,732	214,663
1992	-	-	51,884	155,976	5,419	9,356	222,635

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[j] Includes Cyprus, Malta, and Turkey.

APPENDIX SECTION

2. Fleet, by tonnage

Appendix 7.--Western Europe. High-seas fishing vessels in the 500-999 GRT class, 1975-92.

Year	Belgium	Denmark	Faroe Islands	Finland	France	Germany (FRG)
	Number of vessels					
1975	1	9	12	1	67	38
1976	1	10	14	1	76	37
1977	1	11	14	1	75	40
1978	1	12	15	1	71	39
1979	1	12	14	1	71	35
1980	1	12	15	1	72	24
1981	1	16	14	1	65	17
1982	1	16	13	-	64	15
1983	1	15	13	-	66	14
1984	1	16	15	-	66	14
1985	1	21	15	-	68	12
1986	1	25	17	-	62	10
1987	1	47[k]	-[l]	-	66	10
1988	1	55	-	-	65	8
1989	1	55	-	-	67	7
1990	1	57	-	-	65	7
1991	-	49	-	-	66	23[m]
1992	-	50	-	-	62	7

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[k] Includes vessels from the Faroe Islands.

[l] Included under Denmark beginning in 1987.

[m] On October 3, 1990, the Federal Republic of Germany (FRG) was reunited the the German Democratic Republic (GDR). This resulted in 16 ex-GDR fishing vessels in the 500- to 999-GRT range being added to the FRG fleet. Most of these vessels were sold in 1991-92.

Appendix 7.--Western Europe. Number of high-seas fishing vessels in the 500-999 gross registered tons class, 1975-92, continued...

Year	Greece	Iceland	Ireland	Italy	Netherlands	Norway
	Number of vessels					
1975	22	23	-	38	10	64
1976	21	24	-	37	8	73
1977	20	23	-	35	7	73
1978	20	23	-	33	10	82
1979	19	26	-	31	10	84
1980	19	28	-	31	14	82
1981	19	29	4	24	18	79
1982	16	29	4	22	24	79
1983	14	28	5	21	24	79
1984	11	28	6	20	23	79
1985	11	29	6	20	20	79
1986	10	30	5	18	20	85
1987	9	31	5	18	23	87
1988	9	40	4	18	21	87
1989	10	45	4	18	26	78
1990	12	43	4	18	27	79
1991	12	47	4	17	26	76
1992	13	48	4	17	26	75

Source: Lloyd's Register of Shipping Statistical Tables, Lloyd's Register of Shipping, London, UK, various years.

Appendix 7.--Western Europe. Number of high-seas fishing vessels in the 500-999 gross registered tons class, 1975-92, continued...

Year	Portugal	Spain	Sweden	U.K.	Other[n]
	Number of vessels				
1975	16	93	1	105	0
1976	17	98	2	82	0
1977	17	97	2	71	0
1978	19	99	2	58	2
1979	19	96	2	46	1
1980	19	87	2	40	2
1981	19	83	3	19	2
1982	18	70	2	19	3
1983	18	69	2	15	2
1984	17	74	2	12	3
1985	17	75	3	11	4
1986	17	78	3	10	4
1987	20	90	2	11	4
1988	28	96	3	23	4
1989	17	98	4	24	3
1990	17	100	5	24	2
1991	17	109	7	25	2
1992	16	99	8	25	2

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

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[n] Includes Cyprus, Malta, and Turkey.

Appendix 8.--Western Europe. High-seas fishing vessels in the 1,000-1,999 GRT class, 1975-92.

Year	**Cyprus**	**Denmark**	**Faroe Islands**	**Finland**	**France**	**Germany (FRG)**
	Number of vessels					
1975	-	-	1	1	28	17
1976	-	1	1	-	28	14
1977	-	1	1	-	25	9
1978	1	1	1	-	23	8
1979	2	1	1	-	19	7
1980	-	1	1	-	17	6
1981	-	1	3	-	18	3
1982	-	1	3	-	18	3
1983	-	1	3	-	18	3
1984	-	3	4	-	19	2
1985	-	6	5	-	19	2
1986	-	8	5	-	20	1
1987	1	17[o]	-[p]	-	20	1
1988	1	25	-	-	21	-
1989	1	24	-	-	19	1
1990	1	22	-	-	19	2
1991	1	24	-	-	24	10[q]
1992	1	20	-	-	23	11

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[o] Includes fishing vessels from the Faroe Islands beginning in 1987.

[p] Listed under Denmark beginning in 1987.

[q] On October 3, 1990, the Federal Republic of Germany (FRG) was united with the former German Democratic Republic (GDR). This resulted in the addition of several former GDR fishing vessels to the FRG fishing fleet. Some of these vessels were sold in 1991-92.

Appendix 8.--Western Europe. Number of high-seas fishing vessels in the 1,000-1,999 gross registered tons class, 1975-92, continued...

Year	Greece	Iceland	Ireland	Italy	Netherlands	Norway
	Number of vessels					
1975	10	3	-	22	2	8
1976	10	1	1	20	3	5
1977	8	1	2	10	3	6
1978	7	1	2	18	2	10
1979	7	1	2	18	4	16
1980	7	-	2	17	4	15
1981	7	1	-	15	3	16
1982	7	-	-	16	6	18
1983	5	-	-	14	5	18
1984	4	--	-	14	9	21
1985	4	-	-	12	7	19
1986	3	1	1	12	5	23
1987	2	2	2	13	6	32
1988	3	2	2	13	6	42
1989	1	2	2	12	2	50
1990	1	2	2	12	3	52
1991	-	2	2	12	3	55
1992	1	3	3	10	1	52

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, UK, various years.

Appendix 8.--Western Europe. Number of high-seas fishing vessels in the 1,000-1,999 gross registered tons class, 1975-92, continued...

Year	Portugal	Spain	Sweden	U.K.
	Number of vessels			
1975	44	69	-	38
1976	44	78	-	43
1977	47	78	-	38
1978	48	82	-	36
1979	48	77	-	37
1980	50	73	1	37
1981	52	69	1	35
1982	54	69	1	23
1983	55	67	1	18
1984	54	64	1	16
1985	53	62	1	12
1986	53	62	1	8
1987	52	72	1	9
1988	52	85	-	17
1989	50	102	-	15
1990	50	105	-	13
1991	43	96	-	12
1992	36	86	-	13

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Appendix 9.--Western Europe. High-seas fishing vessels over 2,000 GRT, 1975-92.

Year	Cyprus	Denmark	Faroe Islands	France	Germany (FRG)	Greece	Ireland
	Number of vessels						
1975	-	-	-	5	-	-	-
1976	-	-	-	5	-	-	-
1977	-	-	-	5	-	-	-
1978	-	-	-	5	-	-	-
1979	-	-	-	3	-	-	-
1980	-	-	-	3	-	-	-
1981	1	1	-	3	-	-	-
1982	1	1	-	3	-	-	-
1983	1	1	-	3	-	-	-
1984	1	1	1	3	-	-	-
1985	2	1	2	3	-	-	-
1986	1	3	2	3	-	-	-
1987	1	7[a]	-[b]	3	2	1	-
1988	1	10	-	3	1	4	2
1989	-	13	-	3	1	3	1
1990	-	15	-	3	1	4	1
1991	-	13	-	3	1	-	1
1992	2	13	-	2	1	3	1

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, UK, various years.

[a] Includes fishing vessels from the Faroe Islands beginning in 1987.

[b] Included under Denmark beginning in 1987.

Appendix 9.--Western Europe. Number of high-seas fishing vessels over 2,000 gross registered tons, 1975-92, continued...

Year	Italy	Netherlands	Norway	Portugal	Spain	Sweden	U.K.
	Number of vessels						
1975	-	-	-	12	10	-	-
1976	1	-	-	13	11	1	-
1977	1	-	-	13	12	1	-
1978	1	-	-	12	10	1	-
1979	1	-	1	12	6	-	-
1980	1	-	1	9	6	-	-
1981	1	-	2	8	5	-	-
1982	1	-	3	5	5	-	-
1983	1	-	2	4	5	-	-
1984	-	4	2	4	4	-	-
1985	-	6	-	4	6	-	-
1986	-	8	1	4	5	-	-
1987	-	8	5	2	6	-	-
1988	-	9	9	2	7	-	1
1989	-	10	13	2	11	-	2
1990	-	11	12	2	11	-	3
1991	-	12	11	2	14	-	2
1992	-	12	12	2	19	-	3

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Appendix 10.--Western Europe. High-seas fishing vessels, ranked by tonnage, 1975-92.

Year	**Gross Registered Tons (GRT)**			**Total**
	500-999	**1,000-1,999**	**Over 2,000**	
	Number of vessels			
1975	500	243	55	798
1976	501	246	59	806
1977	487	236	60	783
1978	485	236	57	778
1979	468	238	51	757
1980	449	232	47	728
1981	413	224	46	683
1982	395	220	38	653
1983	386	209	32	627
1984	387	211	36	634
1985	392	203	36	631
1986	395	202	33	630
1987	414	231	39	684
1988	452	267	54	773
1989	457	282	65	804
1990	461	296	69	826
1991	480	293	84	857
1992	452	273	79	804

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

Appendix 11.--EC countries. High-seas fishing vessels, ranked by tonnage, 1975-92.

Year	**Gross Registered Tons (GRT)**			**Total**
	500-999	**1,000-1,999**	**Over 2,000**	
	Number of vessels			
1975	268	107	31	406
1976	251	107	32	390
1977	240	95	32	367
1978	224	86	32	342
1979	206	86	30	322
1980	194	85	30	309
1981[c]	183	25	30	238
1982	181	74	24	279
1983	175	65	20	260
1984	169	67	24	260
1985	170	63	22	255
1986[d]	256	173	29	458
1987	290	195	33	518
1988	318	222	44	584
1989	327	228	52	607
1990	332	234	57	623
1991	348	227	73	648
1992	319	207	65	591

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[c] Greece joined the EC and is included in this statistical table beginning in 1981.

[d] Portugal and Spain joined the EC in 1986 and are included in this statistical table beginning in 1986.

Appendix 12.--Non-EC countries. High-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)			Total
	500-999	1,000-1,999	Over 2,000	
	Number of vessels			
1975	232	136	24	392
1976	250	139	27	416
1977	247	141	28	416
1978	261	150	25	436
1979	262	152	21	435
1980	255	147	17	419
1981[e]	230	142	16	388
1982	214	146	14	374
1983	211	144	12	367
1984	218	144	12	374
1985	222	140	14	376
1986[f]	139	29	4	172
1987	124	36	6	166
1988	134	45	10	189
1989	130	54	13	197
1990	129	62	12	203
1991	132	66	11	209
1992	133	66	14	213

Source: *Lloyd's Register of Shipping Statistical Tables,* Lloyd's Register of Shipping, London, UK, various years.

[e] Greece joined the EC in 1981. Data for Greece is included in Appendix 11, and has been removed from this table, beginning in 1981.

[f] Portugal and Spain joined in the EC on January 1, 1986. Data for Portugal and Spain were included in Appendix 11 and has been removed from this table beginning with 1986.

APPENDIX SECTION

3. Total Fleet

Appendix 13.--EC countries. Tonnage of fishing vessels, 1970-80

Country	E.C. Fishing Fleet										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
	Tonnage of vessels										
Belgium	31,185	30,518	23,175	22,824	24,042	23,904	24,044	21,001	20,790	21,318	21,122
Denmark	119,635	120,661	117,761	119,728	131,152	114,594	149,149	146,744	142,000	146,294	132,353
France	282,857	281,653	279,343	271,683	270,467	275,835	261,076	243,362	234,710	197,775	213,720
Germany	163,006	151,893	156,895	137,530	126,075	136,372	134,180	141,372	136,444	119,823	106,489
Ireland	16,600	17,911	19,254	22,772	24,112	25,451	27,667	28,175	29,111	30,370	35,329
Italy	239,713	246,668	252,070	250,350	262,776	269,575	274,638	280,910	295,981	302,598	305,855
Netherlands	70,060	86,816	88,165	95,970	105,232	96,295	90,391	87,224	88,161	86,025	93,161
United Kingdom	289,788.	291,885	279,257	286,311	279,669	254,598	227,733	216,708	206,057	188,498	179,557
TOTAL FLEET	1,212,844	1,228,005	1,215,920	1,207,168	1,223,525	1,196,624	1,188,878	1,165,496	1,153,254	1,092,701	1,087,586

Main Sources: *OECD, Review of Fisheries in OECD Member Countries,* Organisation for Economic Co-Operation and Development, Paris, various years andFishery Fleet Statistics, Bulletin of Fishery Statistics, Food and Agriculture Organization of the United Nations, Rome, various years. **Germany:** *Annual Report on German Fisheries,* Federal Ministry of Food, Agriculture, and Forestry, Bonn, various years. **United Kingdom:** *Sea Fisheries Statistical Tables*, Government Statistical Service, London, various years. (E) = Estimate.

Appendix 14.--EC countries. Tonnage of fishing vessels, 1981-91

Country	E.C. Fishing Fleet										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	Tonnage of vessels										
Belgium	21,845	21,845	22,610	22,663	23,250	23,147	23,798	24,620	25,445	25,498	25,500E
Denmark	114,712	115,681	118,969	112,866	129,082	132,596	131,732	121,765	117,742	114,142	111,500
France	212,391	207,357	212,377	210,921	205,770	202,088	204,549	211,802	212,180	199,771	184,497
Germany	95,454	85,498	89,083	81,009	61,356	58,408	53,700	51,302	50,613	104,000[g]	74,377
Greece[h]	166,739	172,147	172,651	187,227	191,550	150,000E	137,761	130,000E	130,000E	130,000E	130,000E
Ireland	38,486	39,467	35,501	43,692	40,000E	40,000E	40,000E	40,000E	40,000E	40,000E	40,000E
Italy	253,856	260,727	257,767	260,512	266,401	267,516	273,678	273,693	263,165	260,000E	260,000E
Netherlands	104,515	111,247	131,429	145,542	147,781	150,892	158,173	171,626	176,312	175,000E	175,000E
Portugal[i]	211,259	206,815	208,943	193,971	196,705	195,201	209,193	202,455	196,132	186,523	183,306
Spain[j]	750,411	738,468	698,973	692,399	671,804	649,457	692,221	647,731	635,479	625,000E	671,850
United Kingdom	171,327	159,714	150,592	130,380	121,656	116,556	131,312	145,377	137,566	138,000E	138,000E
TOTAL FLEET	2,140,995	2,118,966	2,098,895	2,081,182	2,055,355	1,985,861	2,056,117	2,020,371	1,984,634	1,997,934	1,994,030

Main Sources: OECD, *Review of Fisheries in OECD Member Countries,* Organisation for Economic Co-Operation and Development, Paris, various years and *Fishery Fleet Statistics*, Bulletin of Fishery Statistics, Food and Agriculture Organization of the United Nations, Rome, various years. **Germany:** *Annual Report on German Fisheries,* Federal Ministry of Food, Agriculture, and Forestry, Bonn, various years **United Kingdom:** *Sea Fisheries Statistical Tables*, Government Statistical Service, London, various years. E = Estimate.

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[g] The Federal Republic of Germany (FRG) and the German Democratic Republic (GDR) were united on October 3, 1990.

[h] Greece joined the EC on January 1, 1981.

[i] Portugal joined the EC on January 1, 1986.

[j] Spain joined the EC on January 1, 1986.

Appendix 15.--Non-EC countries. Tonnage of non-EC fishing vessels, 1970-80

Country	Non-EC Fishing Fleet										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
	Tonnage of vessels										
Faroe Islands	39,760	41,030	42,114	40,367	41,035	47,083	42,368	45,000e	52,311	52,311	51,744
Finland	6,000E	6,000E	5,825	6,005	3,386	9,863	5,900	9,914	10,397	9,898	10,237
Greece	50,000E	50,000E	50,000E	50,000E	45,581	46,801	46,606	47,000	47,000E	134,616	159,749
Greenland	10,000E	10,000E	10,000E	10,000E	10,000E	10,338	10,338	10,316	11,886	12,792	14,573
Iceland	78,519	78,997	81,335	91,890	96,876	99,195	97,063	101,740	104,577	100,059	105,053
Norway	400,000E	398,020	369,416	372,956	353,911	359,152	367,533	362,145	383,123	377,947	362,403
Portugal	155,496	131,265	172,582	170,726	179,163	172,613	194,969	200,510	176,988	205,119	204,867
Spain	653,191	601,087	674,610	642,408	687,684	723,751	807,365	817,524	785,642	762,022	759,421
Sweden	55,200	50,000E	45,000E	44,246	41,000E	40,644	40,204	40,000E	40,843	44,077	45,173
TOTAL FLEET	1,448,166	1,366,399	1,450,882	1,428,598	1,458,636	1,509,440	1,612,346	1,634,149	1,612,767	1,698,841	1,713,220

Main Sources: OECD, *Review of Fisheries in OECD Member Countries,* Organisation for Economic Co-Operation and Development, Paris, various years and *Fishery Fleet Statistics*, Bulletin of Fishery Statistics, Food and Agriculture Organization of the United Nations, Rome, various years. (E) = Estimate.

Appendix 16.--Non-EC countries. Tonnage of non-EC fishing vessels, 1981-91.

Country	Non-EC Fishing Fleet										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	Tonnage of vessels										
Faroe Islands	60,000E	60,000E	60,000E	60,913	64,357	67,386	71,576	73,398	67,786	69,968	61,719
Finland	11,048	11,000E	10,866	10,001	9,385	9,370	9,559	9,348	8,163	8,000E	8,000E
Iceland	106,314	109,905	109,819	109,956	111,194	111,605	116,778	119,709	120,741	120,156	121,630
Norway	342,784	290,092	280,921	287,483	287,301	352,532	452,754	284,343	287,044	284,401	268,940
Sweden	46,064	45,578	44,891	46,477	47,000E	48,000E	52,107	55,401	48,929	48,000E	48,000E
TOTAL FLEET	566,210	516,575	506,497	514,830	519,237	588,893	702,774	542,199	532,663	530,525	508,289

Main Sources: *OECD, Review of Fisheries in OECD Member Countries,* Organisation for Economic Co-Operation and Development, Paris, various years and Fishery Fleet Statistics, Bulletin of Fishery Statistics, Food and Agriculture Organization of the United Nations, Rome, various years. (E) = Estimate.

Appendix 17.--EC countries. Number of fishing vessels, 1970-80

Country	E.C. Fishing Fleet										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
	Number of vessels										
Belgium	294	284	267	248	245	239	227	201	202	197	195
Denmark	7,570	7,432	7,140	7,123	7,310	7,444	7,430	7,331	7,200	7,100e	7,084
France	13,430	14,016	14,163	13,347	13,268	12,967	12,764	12,524	12,128	11,118	11,090
Germany	1,832	1,734	1,788	1,724	1,769	1,778	1,747	1,272	1,256	1,185	1,136
Ireland	932	952	1,020	1,512	1,159	1,132	1,237	1,353	1,460	1,539	1,616
Italy	19,774	20,166	20,484	20,744	20,883	21,227	21,436	21,790	22,388	22,604	22,492
Netherlands	1,257	1,156	1,102	1,076	1,101	1,061	1,025	933	926	908	930
United Kingdom	5,923	6,069	6,327	6,578	6,916	6,691	6,740	6,953	7,053	7,242	6,283
TOTAL FLEET	51,080	51,809	52,403	52,490	52,651	52,539	52,606	52,357	52,613	51,893	50,826

Source: **Main Sources:** OECD, *Review of Fisheries in OECD Member Countries*, Organisation for Economic Co-Operation and Development, Paris, various years and *Fishery Fleet Statistics, Bulletin of Fishery Statistics*, Food and Agriculture Organization of the United Nations, Rome, various years. **Belgium:** *L'évolution du secteur belge de la pêche maritime en 1991*, Conseil Central de l'Economie, Commission Consultative Spéciale de la Pêche, Bruxelles, 1992. **Germany:** *Annual Report on German Fisheries*, Federal Ministry of Food, Agriculture and Forestry, Bonn, various years. **United Kingdom:** *Sea Fisheries Statistical Tables*, Government Statistical Service, London, various years. (E) = Estimate

Appendix 18.--EC countries. Number of fishing vessels, 1981-91

Country	EC Fishing Fleet										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	Number of vessels										
Belgium	193	187	187	191	188	193	194	195	200	194	190E
Denmark	3,181	3,228	3,321	3,307	3,301	3,265	3,228	3,027	2,924	2,830	2,749
France	12,122	12,836	11,660	11,761	11,508	11,414	11,355	11,243	10,358	8,651	7,388
Germany	1,088	1,553	1,617	1,077	992	672	643	628	591	1,232[k]	1,843[l]
Greece[m]	12,000E	12,000E	12,937	13,535	15,000E	17,000E	20,228	20,000E	21,813	21,791	21,000E
Ireland	1,664	1,664	1,566	1,545	1,596	1,398	1,200E	1,200E	1,200E	1,200E	1,200E
Italy	18,898	19,324	19,099	26,537	26,780	19,751	19,831	19,756	18,433	18,000E	18,000E
Netherlands	995	1,005	1,041	1,055	1,063	1,059	1,060	1,076	1,059	1,060E	1,060E
Portugal[n]	6,531	6,574	6,834	7,209	7,112	7,001	17,000E	17,147	16,603	16,251	14,866
Spain[o]	17,555	17,499	17,740	17,801	17,665	17,454	15,000E	14,258	13,747	12,000E	19,877
United Kingdom	7,351	6,797	7,227	7,584	7,920	8,166	8,204	8,132	8,283	8,000E	8,000E
TOTAL FLEET	81,578	82,667	83,229	91,602	93,125	87,373	97,943	96,662	95,211	91,209	96,173

Main Sources: OECD, *Review of Fisheries in OECD Member Countries*, Organisation for Economic Co-Operation and Development, Paris, various years and *Fishery Fleet Statistics, Bulletin of Fishery Statistics*, Food and Agriculture Organization of the United Nations, Rome, various years. **Belgium:** *L'évolution du secteur belge de la pêche maritime en 1991*, Conseil Central de l'Economie, Commission Consultative Spéciale de la Pêche, Bruxelles, 1992. **Germany:** *Annual Report on German Fisheries*, Federal Ministry of Food, Agriculture and Forestry, Bonn, various years. **United Kingdom:** *Sea Fisheries Statistical Tables*, Government Statistical Service, London, various years. (E) = Estimate.

[k] The Federal Republic of Germany (FRG) and the German Democratic Republic (GDR) were united on October 3, 1990.

[l] Unification temporarily increased the size of the FRG fishing fleet, but many of these former GDR vessels have since been sold.

[m] Greece joined the EC on January 1, 1981.

[n] Portugal joined the EC on January 1, 1986.

[o] Spain joined the EC on January 1, 1986.

Appendix 19.--Non-EC countries. Number of fishing vessels, 1970-80

Country	Non-EC Fishing Fleet										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
	Number of vessels										
Faroe Islands	176	297	329	331	335	239	250e	250e	250e	250e	260
Finland	200e	327	222	224	200e	202	200e	201	204	209	211
Greece	2,380	2,409	3,000e	3,000e	3,000e	3,000e	3,000e	3,000e	3,821	4,020	4,333
Greenland	228	237	248	294	301	300	300	298	310	321	330
Iceland	766	816	867	901	910	900	879	850e	850e	850e	873
Norway	35,248	30,750	30,996	26,823	27,832	28,509	24,586	24,847	25,180	25,874	26,504
Portugal	4,259	4,300e	4,064	4,208	2,792	4,606	4,700e	4,804	4,843	6,107	6,352
Spain	15,245	15,500e	15,998	16,113	16,500e	16,852	17,148	17,152	17,173	17,282	17,390
Sweden	1,894	2,000e	2,500e	2,862	2,668	2,810	3,659	3,500e	3,709	4,113	3,896
TOTAL FLEET	60,020	56,012	57,673	54,201	54,003	56,977	53,512	54,153	55,660	58,246	59,348

Main Sources: OECD, *Review of Fisheries in OECD Member Countries,* Organisation for Economic Co-Operation and Development, Paris, various years and *Fishery Fleet Statistics, Bulletin of Fishery Statistics*, Food and Agriculture Organization of the United Nations, Rome, various years. **Norway**: *Fishery Statistics, 1982*, Norges Offisielle Statistisk Sentralbyra, 1984, p. 19, for 1971-1980. (E) = Estimate.

Appendix 20.--Non-EC countries. Number of fishing vessels, 1981-91

Country	Non-EC Fishing Fleet										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	Number of vessels										
Faroe Islands	260E	260E	260E	260E	263	450	456	267	256	233	226
Finland	216	211E	611	594	566	565	558	563	536	500E	500E
Iceland	842	837	832	829	826	822	909	957	947	997	993
Norway	26,684	26,733	26,045	25,564	24,078	23,078	22,014	20,935	18,514	17,392	17,232
Sweden	4,035	2,338	2,428	2,279	2,200e	2,200e	2,187	2,172	1,132	1,000E	1,000E
TOTAL FLEET	32,037	30,379	30,176	29,526	27,933	27,115	26,124	24,894	21,385	20,122	19,951

Main Sources: OECD, *Review of Fisheries in OECD Member Countries*, Organisation for Economic Co-Operation and Development, Paris, various years and *Fishery Fleet Statistics, Bulletin of Fishery Statistics*, Food and Agriculture Organization of the United Nations, Rome, various years. (E) = Estimate.

APPENDIX SECTION

4. Number of fishermen

Appendix 21.--EC. Number of fishermen, 1970-80

Country	E.C. Fishermen										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
	Number of fishermen										
Belgium	1,643	1,633	1,607	1,548	1,483	1,439	1,415	1,326	1,275	1,255	1,269
Denmark	15,457	15,120	14,691	14,745	15,126	15,316	15,229	14,909	15,000	14,800	14,700
France	35,799	36,000	35,000e	34,000e	33,000e	32,172	24,396	23,299	22,456	22,548	22,019
Germany	6,669	6,407	5,373	5,948	5,758	5,280	5,160	5,105	4,800	4,396	3,753
Ireland	5,862	5,801	6,142	6,593	6,676	6,482	7,393	8,179	8,620	8,711	8,824
Italy	62,045	62,444	65,000	65,000	65,000	65,000	65,000	45,000	45,000	40,000	40,000
Netherlands	5,514	5,063	4,947	4,572	4,646	4,619	4,327	3,164	3,604	3,421	3,677
United Kingdom	21,651	22,013	22,703	23,476	23,426	22,604	22,570	22,480	22,885	22,659	23,289
TOTAL	154,640	154,481	155,463	155,882	155,115	152,912	145,490	123,462	123,640	117,790	117,531

Main Sources: OECD, *Review of Fisheries in OECD Member Countries*, Organisation for Economic Co-Operation and Development, Paris, various years and *Fishery Fleet Statistics*, *Bulletin of Fishery Statistics*, Food and Agriculture Organization of the United Nations, Rome, various years. **Belgium:** *L'évolution du secteur belge de la pêche maritime en 1991*, Conseil Central de l'Economie, Commission Consultative Spéciale de la Pêche, Bruxelles, 1992. **Germany:** *Annual Report on German Fisheries*, Federal Ministry of Food, Agriculture and Forestry, Bonn, various years. **United Kingdom:** *Sea Fisheries Statistical Tables*, Government Statistical Service, London, various years

Appendix 22.--EC. Number of fishermen, 1981-91

Country	E.C. Fishermen										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	Number of fishermen										
Belgium	1,261	1,270	1,274	1,282	1,266	1,258	1,263	1,312	1,271	1,249	1,248
Denmark	14,600	14,500	14,500	14,500	10,000E	9,000	9,000E	7,642	7,323	7,000E	7,000E
France	21,255	20,177	19,539	20,000	20,000E	20,000E	20,000E	18,479	19,000	20,000E[a]	20,063
Germany	3,906	3,479	3,524	3,338	2,721	2,673	2,753	2,753	2,732	2,682	4,785
Greece[b]	46,500	40,000E	37,159	27,700	27,000	39,000	39,000	39,800	40,164	39,000E	39,000E
Ireland	8,740	8,975	8,532	8,600	7,019	7,000E	7,000E	11,179	12,420	12,000E	12,000E
Italy	34,000	34,000	34,000	37,000	40,000E	40,000E	55,090	54,450	55,000E	55,000E	55,000E
Netherlands	4,073	4,206	4,406	4,410	4,000E	4,000E	4,000E	3,471	3,311	4,290	4,000E
Portugal[c]	37,251	35,000E	33,857	33,585	35,000E	35,000E	43,111	44,256	38,924	39,000E	39,000E
Spain[d]	108,414	106,584	100,000E	102,156	90,000E	94,246	90,000E	94,387	89,074	90,000E	87,581
United Kingdom	23,927	23,011	22,556	21,945	22,181	22,600	22,392	22,237	22,422	22,055	22,000E
TOTAL	303,927	291,202	279,347	274,516	259,187	274,777	293,609	299,966	291,641	292,276	291,677

Main Sources: OECD, *Review of Fisheries in OECD Member Countries*, Organisation for Economic Co-Operation and Development, Paris, various years, *Fishery Fleet Statistics*, *Bulletin of Fishery Statistics*, Food and Agriculture Organization of the United Nations, Rome, various years and Commission of the European Communities, Report 1991 from the Commission to the Council and the Euroepan Parliament on the Common Fisheries Policy, Brussels, December 18, 1991, p.58 (for 1988 and 1989 only). **Belgium:** *L'évolution du secteur belge de la pêche maritime en 1991*, Conseil Central de l'Economie, Commission Consultative Spéciale de la Pêche, Bruxelles, 1992. **Germany:** *Annual Report on German Fisheries*, Federal Ministry of Food, Agriculture and Forestry, Bonn, various years. **United Kingdom:** *Sea Fisheries Statistical Tables*, Government Statistical Service, London, various years. (E) = Estimate.

[a] The Federal Republic of Germany (FRG) and the German Democratic Republic (GDR) were reunited on October 3, 1990. This increased the number of fishermen in the FRG.

[b] Greece joined the EC on January 1, 1981.

[c] Portugal joined the EC on January 1, 1986.

[d] Spain joined the EC on January 1, 1986.

Appendix 23.--Non-EC countries. Number of fishermen, 1970-80

Country	Non-EC Fishermen										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
	Number of fishermen										
Faroe Islands	2,670	2,500	2,500	2,500	2,500	2,500e	2,500e	2,500e	2,500e	2,500e	2,500e
Finland	6,341	9,495	8,521	8,445	8,380	4,828	9,900	7,636	7,650	7,500	7,500
Greece	50,000	50,000e	50,000e	49,000e	48,000e	47,000	47,000	46,500	46,500	45,500	46,500
Iceland	4,900E	4,921	4,921	4,888	4,900	6,128	6,000e	5,319	6,000e	8,711	8,824
Norway	43,018	41,381	38,320	37,537	36,406	35,261	33,264	32,589	33,599	33,955	34,789
Portugal	35,309	33,531	34,458	32,879	30,114	30,562	31,611	34,216	32,341	37,422	38,568
Spain	69,059	68,880	67,748	68,074	70,137	71,810	113,241	112,912	111,005	109,389	109,250
Sweden	6,996	7,976	7,000e	6,503	6,000e	6,000e	6,699	6,699e	6,699	6,199	5,541
TOTAL	215,623	216,184	210,968	207,326	203,937	201,589	247,715	245,871	243,794	248,676	250,972

Main Sources: OECD, *Review of Fisheries in OECD Member Countries*, Organisation for Economic Co-Operation and Development, Paris, various years and *Fishery Fleet Statistics, Bulletin of Fishery Statistics*, Food and Agriculture Organization of the United Nations, Rome, various years.

Appendix 24.--Non-EC countries. Number of fishermen, 1981-91

Country	Non-EC fishermen										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	Number of fishermen										
Faroe Islands	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E	2,500E
Finland	4,542	4,415	4,499	4,735	6,994	6,950	6,900	5,821	5,396	5,000E	2,815
Iceland	7,314	7,617	7,383	7,706	6,420	6,921	5,908	6,262	6,290	6,551	6,000E
Norway	35,311	30,000	28,046	29,632	29,559	29,981	29,915	29,350	28,655	27,518	27,000E
Sweden	5,300E	5,100E	4,900E	4,700E	4,678	5,000E	5,000E	5,000E	5,000E	5,000E	5,000E
TOTAL	54,967	49,632	47,328	49,273	50,151	51,352	50,223	48,933	47,841	46,569	43,315

Main Sources: OECD, *Review of Fisheries in OECD Member Countries,* Organisation for Economic Co-Operation and Development, Paris, various years and *Fishery Fleet Statistics, Bulletin of Fishery Statistics*, Food and Agriculture Organization of the United Nations, Rome, various years. **Norway**: *Fishery Statistics, 1989-90*, Norges Offisielle Statistiskk, Sentralbyra, 1992, p. 18. (E) = Estimate.

APPENDIX SECTION

B. EC INTERNATIONAL AGREEMENTS

Appendix 25.--EC. International fishery agreements, by country, 1977-1993.

Country	First treaty signed	Current treaty status	Payments		Vessels licensed to fish in local waters	
					Tuna	Fish & shellfish
	Year		*ECU thousand*	*US$1 thousand*	*Number of Vessels*	*Tonnage*
CARIBBEAN						
Dominica	1987	6/93-6/96	2,050	2,481	None	NA[e]
Sub-total			2,050	2,481		
NORTH AMERICA						
Canada	1979	Special tariffs on certain Canadian products				
Greenland	1985	1/90-12/94	34,250	38,627	None	NA
United States	1977	Access to surplus U.S. fish species				
Sub-Total			34,250	38,627		
NORTHERN EUROPE						
Faroe Islands	1980	Special quota allocations				
Finland	1983	Special quota allocations				
Iceland	Special tariff arrangements for some Icelandic fishery products.					
Norway	1980	Special quota allocations for reciprocal fishing rights.				
Sweden	1981	Exchange of quotas (*)				
Latvia	1992	Recipocal fishing rights.				
Lithuania	1992	Reciprocal fishing rights.				
Estonia	1992	Reciprocal fishing rights.				
WEST AFRICA						
Angola	1987	5/92-5/94	16,700	18,834	32	9,150

[e] A total of 220 licenses were issued for small, artisanal vessels under 40 feet in length.

Cape Verde	1990	9/91-9/94	2,450	2,763	45	420
Equatorial Guinea	1983	6/89-6/92	6,500	7,331	80	9,000
Gabon	1988	3 years	9,150	10,319	66	NA
Gambia, The	1987	7/90-6/93[f]	3,950	4,455	65	17,270
Guinea (Bissau)	1980	6/93-6/95	12,450	14,041	32	15,000
Guinea (Conakry)	1980	1/92-12/93	7,100	8,007	37	12,000
Ivory Coast	1990	1/91-1/94	6,600	7,443	89	6,300
Mauritania	1979	8/90-7/93	28,658	32,320	63	26,950
Morocco	1988	5/92-5/96	545,500	615,215	26	97,287
Sao Tome & Principe	1983	6/93-5/96	1,900	2,143	51	None
Senegal	1979	10/92-10/94	31,800	35,864	79	31,000
Sierra Leone	1990	2 years	5,350	6,034	89	10,300
Sub-total			678,108	764,770		
EAST AFRICA						
Madagascar	1984	5/92-5/95	1,675	1,889	50	None
Mozambique	1983	1/90-12/91	6,250	7,049	44	4,800
Tanzania	1990	3 years	560	632	NA	NA
Sub-total			8,485	9,569		
INDIAN OCEAN:						
Comoro Islands	1988	7/91-7/94	1,400	1,579	40	None
Mauritius	1988	12/90-11/93	1,620	1,827	40	None
Seychelles	1984	1/93-1/96	9,600	10,827	40	None
Sub-total			12,620	14,233	120	0
Total:			701,263	790,884		

Source: *Commission of the European Communities,* "Report 1991 from the Commission to the Council and the European Parliament on the Commo Fisheries Policy," SEC(91) 2288, Brussels, December 18, 1991, p. 39 and other EC documents. (*) Since 1980, the EC has been paying Sweden an annual contribution towards the costs of salmon breeding. This contribution amounted to ECU 765,000 (US$926,000) in 1981.

Exchange rate converted at US$1.00 equals ECU0.89 (or ECU1.00 = US$1.13) based on market rate on August 10, 1993..

[f] The EC has agreed to extend the agreement, but negotiators have not yet met. The number of licenses will be decreased as will the level of payments according to preliminary information.

APPENDIX SECTION

C. EC DECOMMISSIONING PROGRAMS

Appendix 26.--EC. Fishing vessels withdrawn under provisions of Council Directive 83/515/EEC and Article 24 or Regulation (EEC) No. 4028/86.

Country	**Vessels decommissioned**				
	1985	**1986**	**1987**	**1988**	**1989**
	Number of vessels				
Belgium	10	4	3	-	-
Denmark	10	154	18	110	25
France	0	5	1	3	1
Germany, FRG	0	15	-	15	-
Greece	0	67	35	32	-
Italy	0	29	7	16	-
Netherlands	5	4	-	3	1
Portugal	0	45	21	24	-
United Kingdom	97	NA	NA	NA	NA
TOTAL	122	323	85	203	27

Source: Vessels withdrawn according to Council Directive 83/515/EEC, *Official Journal of the European Communitie* No. C. 276/1, November 1, 1986 and Vessels withdrawn according to Article 24 of Regulation (EEC) NO. 4028/86, *Official Journal of the European Communities*, No C., 320/2, December 22, 1989.

Appendix 27.--EC. Fishing fleet size on January 1, 1987, and the projected size of the fleet on December 31, 1989, 1990, and 1991.

Country	1987	Decommissioning Objectives		
		1989	1990	1991
	Gross Registered Tons			
Belgium	25,165	24,785	22,870	21,340
Denmark	136,894	133,403	122,899	119,400
France	198,000	197,612	195,671	194,119
Greece	137,761	137,079	133,672	130,946
Germany, FRG	51,500	51,270	50,120	49,200
Ireland	58,845	57,355	49,903	43,941
Italy	302,986	299,507	282,114	268,198
Netherlands	82,400	80,640	71,840	64,796
Portugal (Mainland)	188,218	n.a.	n.a.	184,459
Portugal (Azores)	4,602	n.a.	n.a.	6,000
Portugal (Madeira)	15,850	n.a.	n.a.	19,081
Spain	623,719	620,207	602,642	588,590
United Kingdom	163,410	161,231	150,336	141,620
TOTAL FLEET	1,964,185	1,738,304	1,659,197	1,810,350

Sources: *Official Journal of the European Communities*, Legislation, Volume 33, March 14, 1990, and *Eurofish Repo* January 19, 1989, p. BB/2.

Appendix 28.--EC. Fishing fleet size for 1991, the actual size of the fleet in 1992, and projections for 1996.

Country	**1991 Target (12/31/91)**	**Actual size (01/01/92)**	**Over/Under**	**1996 Target (12/31/96)**
	Gross Registered Tons			
Belgium	21,340	27,089	5,749	17,992
Denmark	119,188	126,831	7,643	81,560
France	201,601	195,969	-5,632	180,378
Greece	130,946	162,395	31,449	123,014
Germany, FRG	83,335	78,341	-4,994	74,764
Ireland	48,750	50,693	1,943	51,595
Italy	269,198	267,471	-1,727	249,182
Netherlands	64,796	NA	0	NA
Portugal (Mainland)	186,449	165,447	-21,002	167,503
Portugal (Azores)	19,081	16,546	-2,535	18,267
Portugal (Madeira)	6,000	6,000	0	6,485
Spain	673,303	644,989	-28,314	618,773
United Kingdom	193,027	214,733	21,706	173,455
TOTAL FLEET	1,930,878	1,929,415	-1,463	1,744,976

Source: *Eurofish Report*, December 3, 1992, p. BB/4-8.

APPENDIX SECTION

D. FALKLAND ISLANDS CATCH STATISTICS

Appendix 29.--FALKLAND ISLANDS. West European catch in the 150-mile Falkland Islands Protection Zone (FIP
by country and species, 1987-88

Year/species	France	Greece	Italy	Netherlands	Portugal	Spain	U.K.	Total
	Metric tons							
1987:								
Loligo squid	65	9	476	0	71	1,330	137	2,088
Illex squid	1,361	1,690	4,056	0	327	44,871	2,146	54,451
Martialia	1	0	1	0	0	0	5	7
Hakes	208	234	444	0	134	9,874	678	11,572
Blue whiting	0	107	0	0	0	58	45	210
Hoki	0	0	0	0	0	98	9	107
Kingclip	0	9	10	0	2	370	32	423
Toothfish	5	0	1	0	0	15	0	21
Red cod	0	0	0	0	0	0	0	0
Rays	0	20	54	0	4	203	29	310
Other	14	103	119	0	5	4,290	456	4,987
Total:	1,654	2,172	5,161	0	543	61,109	3,537	74,176
1988:								
Loligo squid	0	103	67	66	383	6,278	136	7,033
Illex squid	0	2,603	3,320	1,406	1,322	30,653	5,080	44,384
Martialia	0	4	1	0	9	37	1	52
Hakes	0	95	179	0	6,588	39,129	2,578	48,569
Blue whiting	0	6	0	0	73	707	68	854
Hoki	0	1	0	3	64	1,383	196	1,647
Kingclip	0	0	12	0	227	1,392	130	1,761
Toothfish	0	0	0	0	27	36	21	84
Red cod	0	0	0	0	0	0	0	0
Rays	0	0	55	0	468	724	180	1,427
Other	0	10	22	0	687	4,121	475	5,315
Total:	0	2,822	3,656	1,475	9,848	84,460	8,865	111,126

Source: Falkland Islands Fisheries Development, various years.

Appendix 30.--FALKLAND ISLANDS. West European fisheries catch in the 150-mile Falkland Islands Protection Z (FIPZ), by country and species, 1989-90.

Year/species	Greece	Italy	Netherlands	Norway	Portugal	Spain	U.K.	Total
	Metric tons							
1989:								
Loligo squid	0	5	0	0	14	2,109	3	2,131
Illex squid	4,482	10,274	4,581	0	8,693	63,033	12,033	103,096
Martialia	0	0	0	0	0	0	0	0
Hakes	174	84	0	0	385	11,906	299	12,848
Blue whiting	44	0	0	0	0	328	8	380
Hoki	73	0	0	0	1	399	33	506
Kingclip	23	2	0	0	9	752	23	809
Toothfish	3	0	0	0	0	1	3	7
Red cod	0	0	0	0	0	0	0	0
Rays	4	0	0	0	23	670	53	750
Other	57	5	0	0	20	2,491	86	2,659
Total:	4,860	10,370	4,581	0	9,145	81,689	12,541	123,186
1990:								
Loligo squid	0	0	0	2	24	1,214	19	1,259
Illex squid	3,112	4,407	3,342	1,324	5,276	45,270	1,525	64,256
Martialia	0	0	0	0	0	1	0	1
Hakes	0	0	3	26	509	10,373	10	10,921
Blue whiting	0	0	0	0	72	2,624	1	2,697
Hoki	0	0	0	28	233	1,756	4	2,021
Kingclip	0	0	1	2	39	712	0	754
Toothfish	0	0	0	2	1	184	0	187
Red cod	0	0	0	0	0	0	0	0
Rays	1	2	0	3	26	764	0	796
Other	10	8	0	3	199	2,487	3	2,710
Total:	3,123	4,417	3,346	1,390	6,379	65,385	1,562	85,602

Source: Falkland Islands Fisheries Development, various years.

Appendix 31.--FALKLAND ISLANDS. West European catches in the 150-mile Falkland Islands Protection Zone (FI
by country and species, 1991-92

Year/species	Italy	Portugal	Spain	U.K.	Total
	Metric tons				
1991:					
Loligo squid	2,335	3,054	35,509	1,921	42,819
Illex squid	56	132	1,167	58	1,413
Martialia	0	0	0	0	0
Hakes	4	49	6,027	7	6,087
Blue whiting	0	4	5,980	0	5,984
Hoki	0	10	2,990	0	3,000
Kingclip	1	3	843	1	848
Toothfish	0	1	975	1	977
Red cod	14	22	2,297	3	2,336
Rays	0	13	1,076	1	1,090
Other	0	0	819	0	819
Total:	2,410	3,288	57,683	1,992	65,373
1992:					
Loligo squid	2,167	1,395	60,843	0	64,405
Illex squid	179	24	947	0	1,150
Martialia	0	0	1	0	1
Hakes	186	23	3,092	0	3,301
Blue whiting	149	1	9,862	0	10,012
Hoki	54	48	5,087	0	5,189
Kingclip	14	6	870	0	890
Toothfish	21	3	626	0	650
Red cod	80	36	4,169	0	4,285
Rays	40	13	1,227	0	1,280
Other	35	0	1,053	0	1,088
Total:	2,925	1,549	87,777	0	92,251

Source: Falkland Islands Fisheries Development, various years.

APPENDIX SECTION

PART II. GRAPHICS

Fig. 1.--West European high-seas fishing fleet, by number of vessels and tonnage, 1975-92.

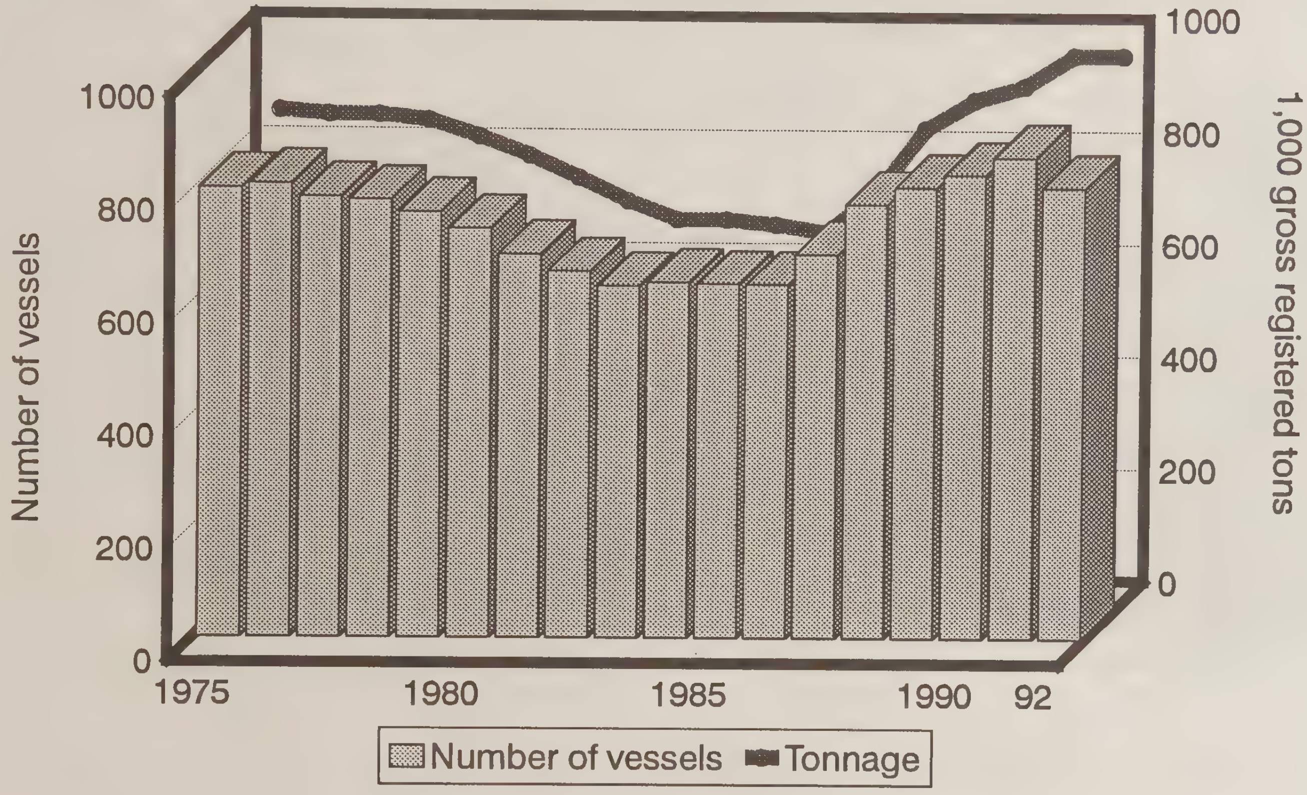


Fig. 2.--West European high-seas fleet, ranked by gross registered tons, 1975-92.

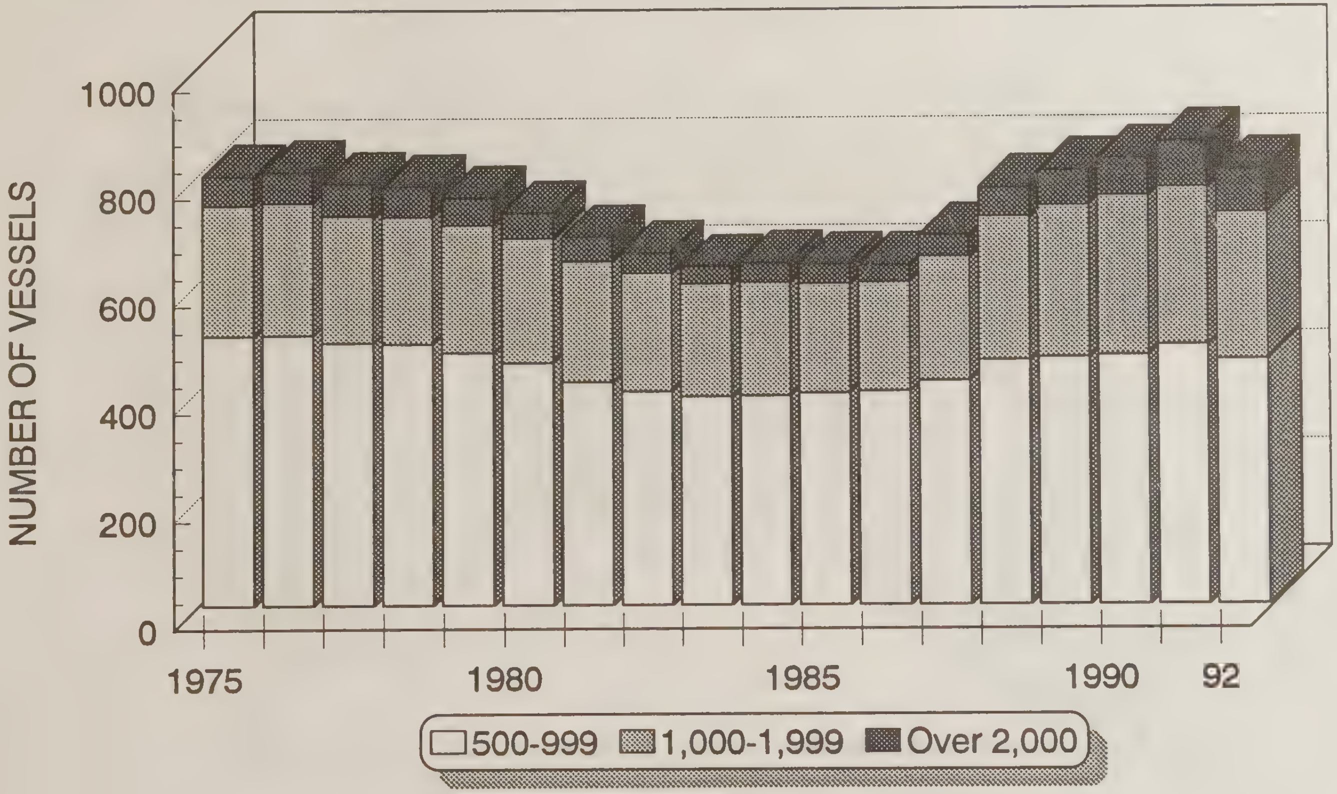


Fig. 3.--West European high-seas fishing fleet, by number of vessels, 1975-92.

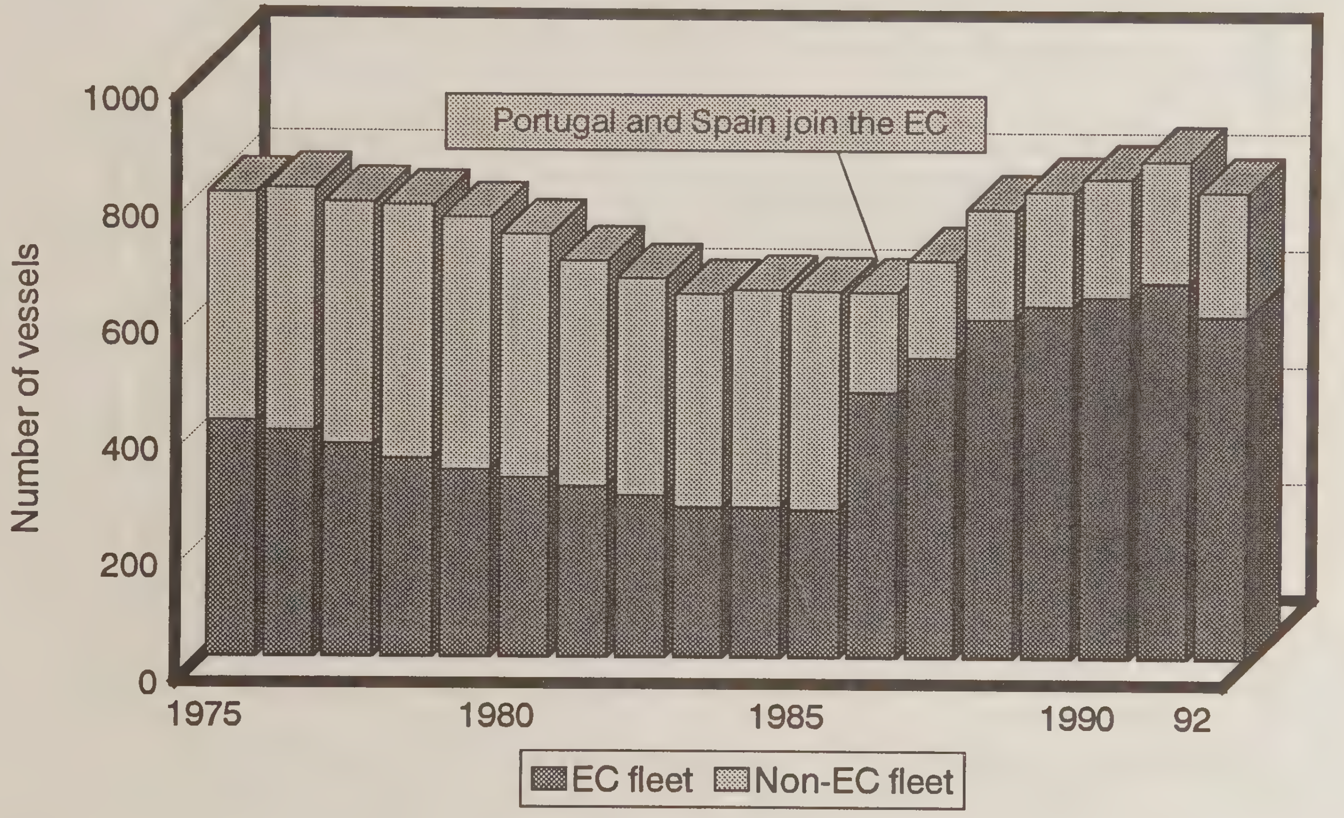


Fig. 4.--EC's high-seas fishing fleet, by number of vessels and country, 1975-92.

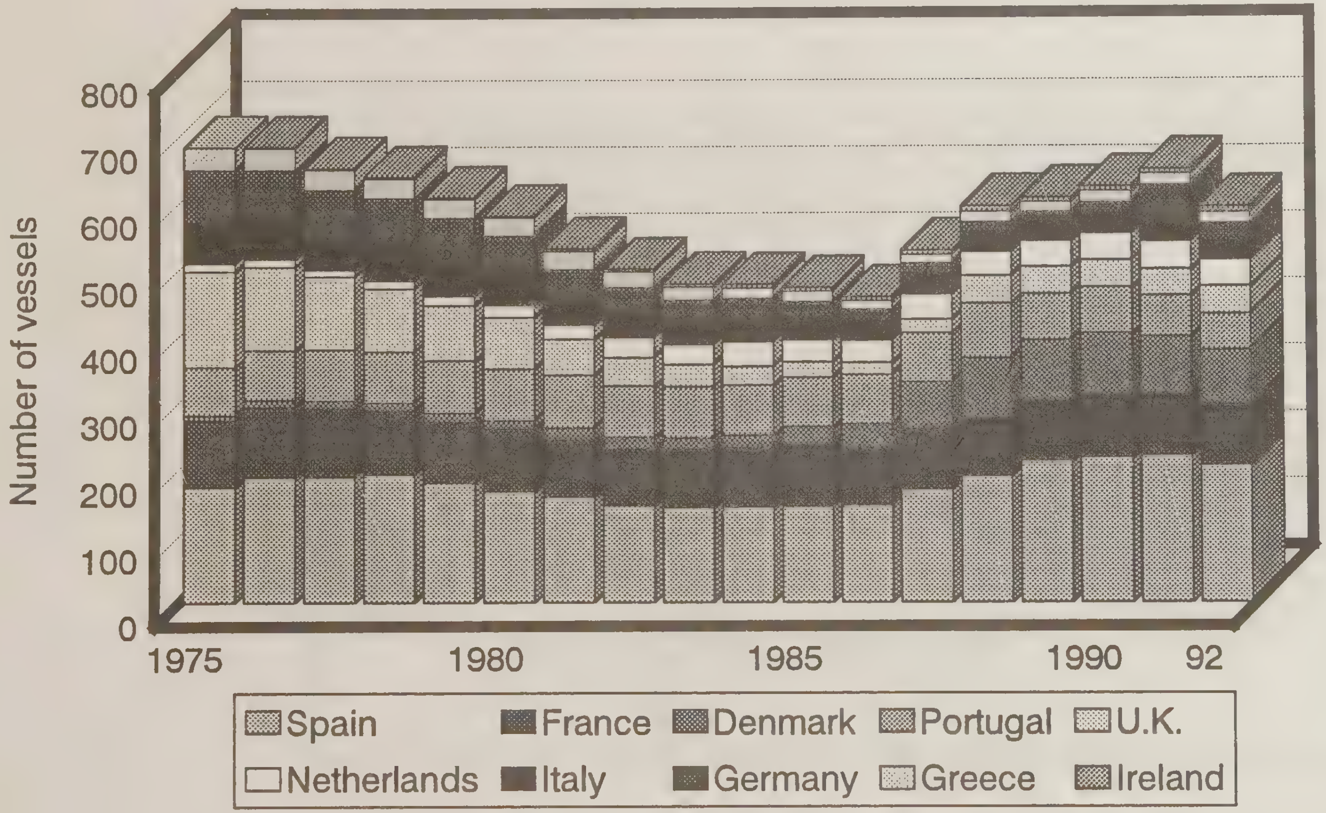
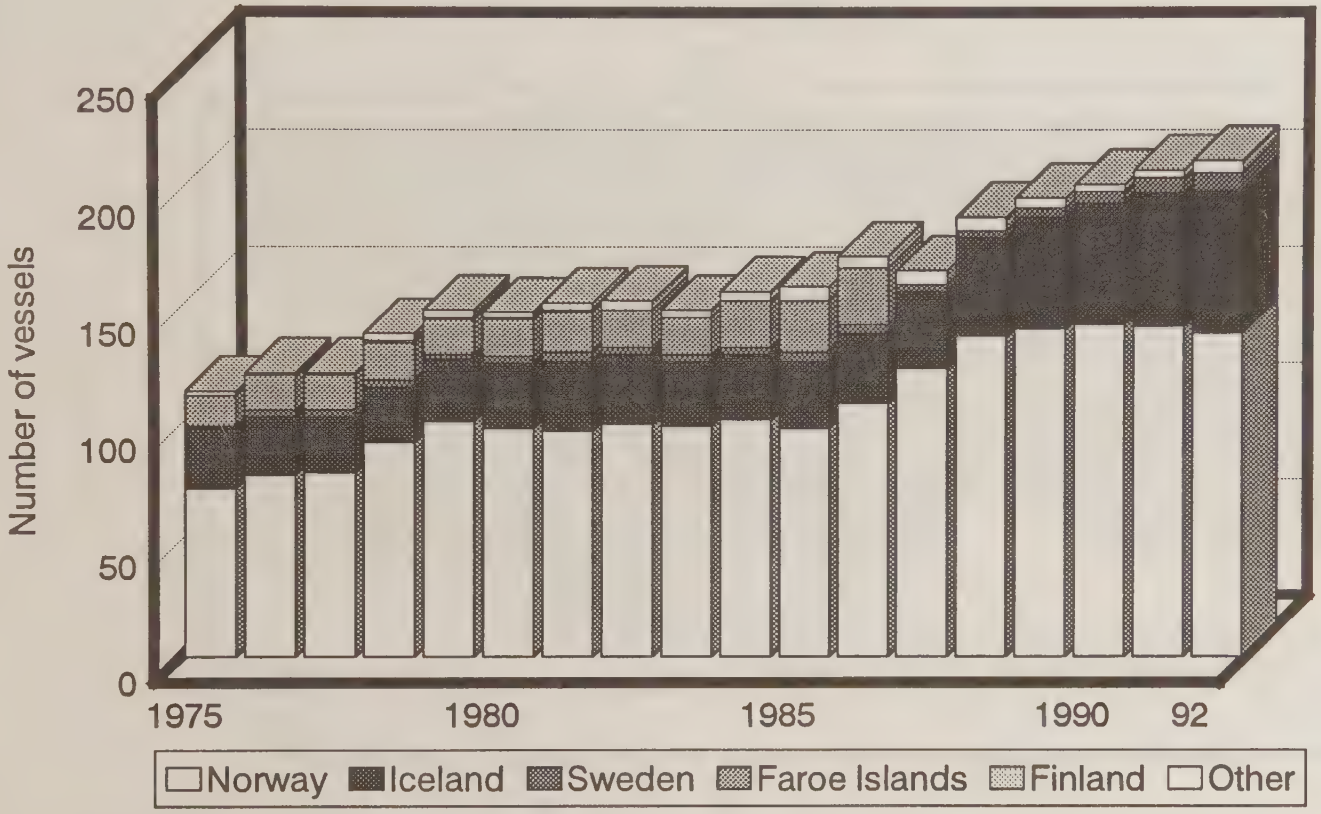


Fig. 5.--Non-EC high-seas fishing fleets, by number of vessels and country, 1975-92.



Other includes Cyprus, Malta, and Turkey.

Fig. 6.--West European fishermen, 1970-91.

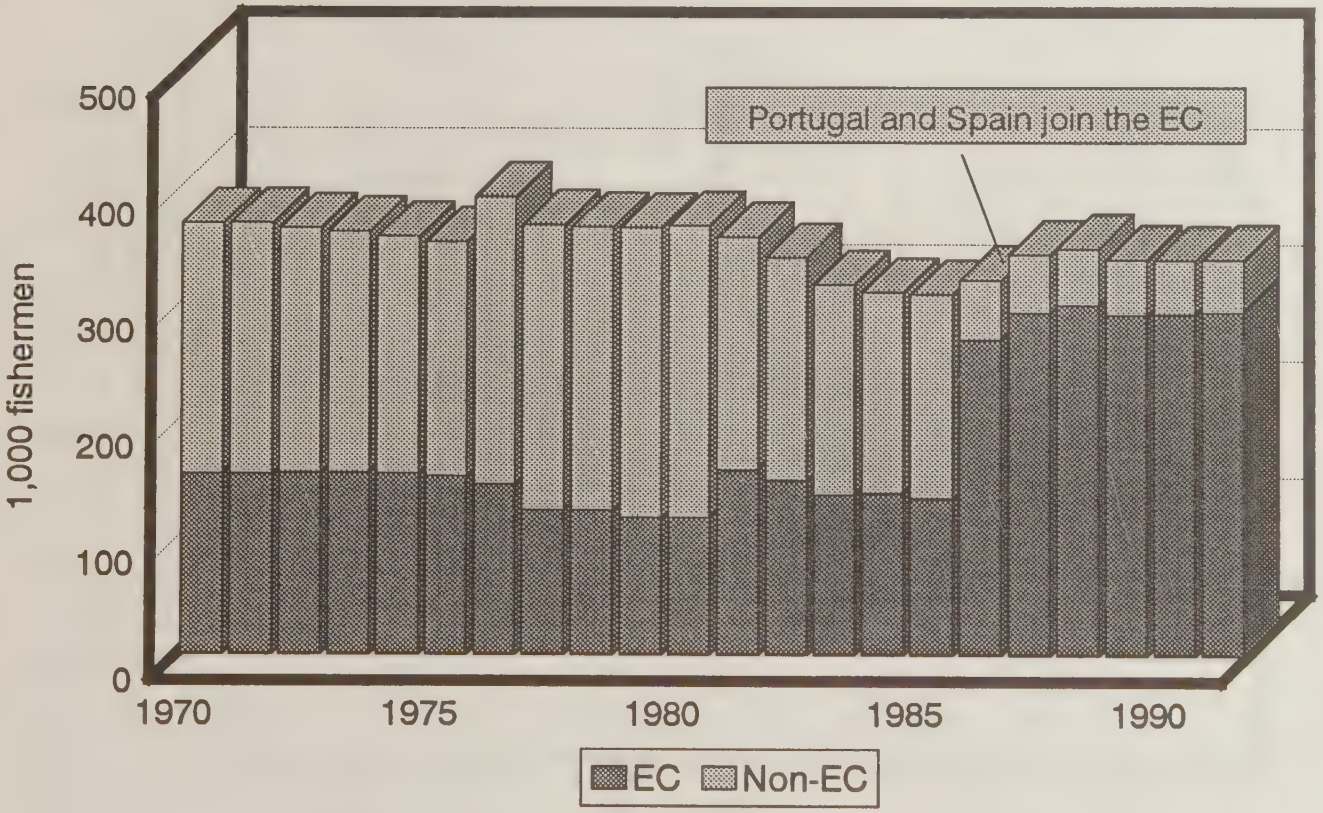


Fig. 7.--West European high-seas fleet, 1992.

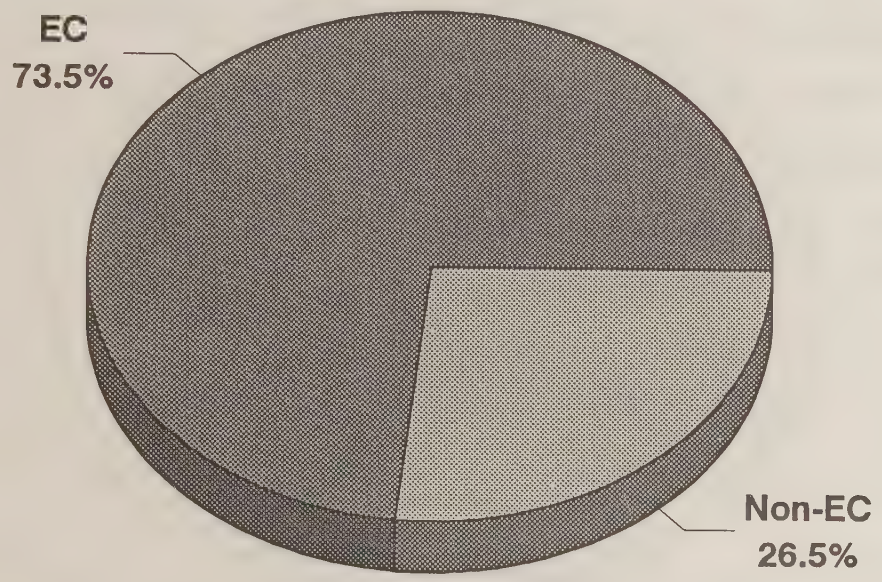


Fig. 8.--EC high-seas fishing fleet, by country, 1992

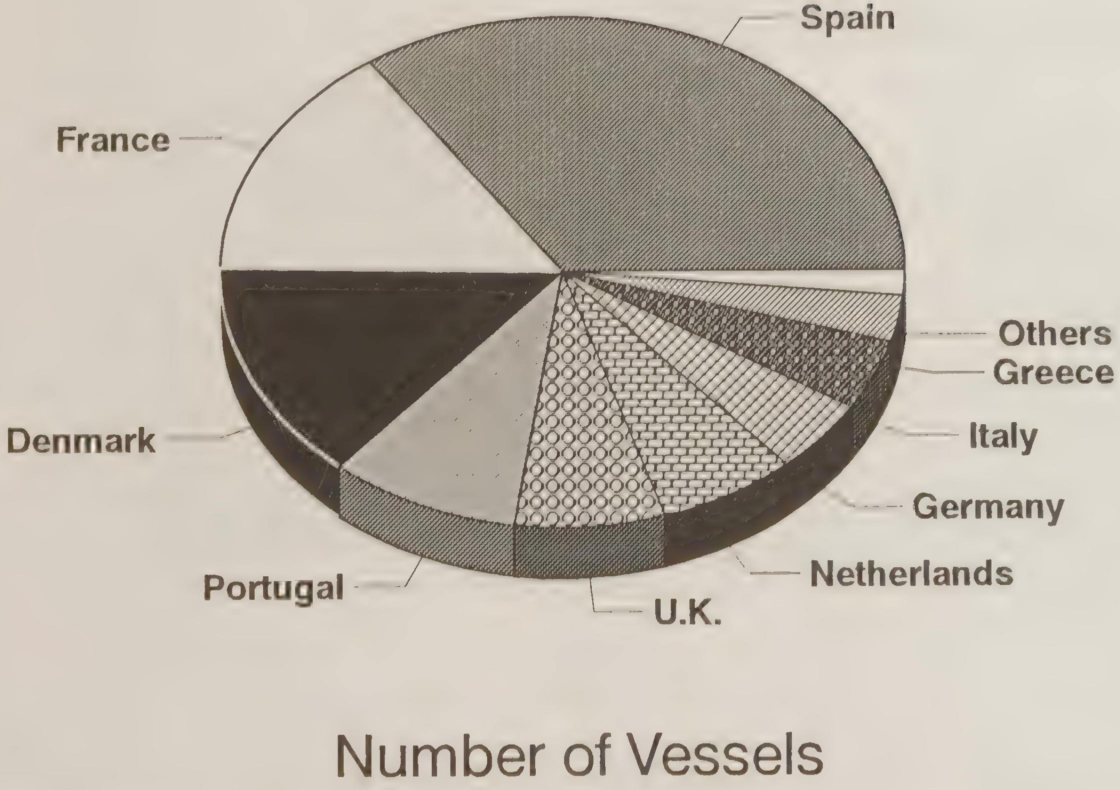


Fig. 9.--EC fisheries catch, by country, 1992

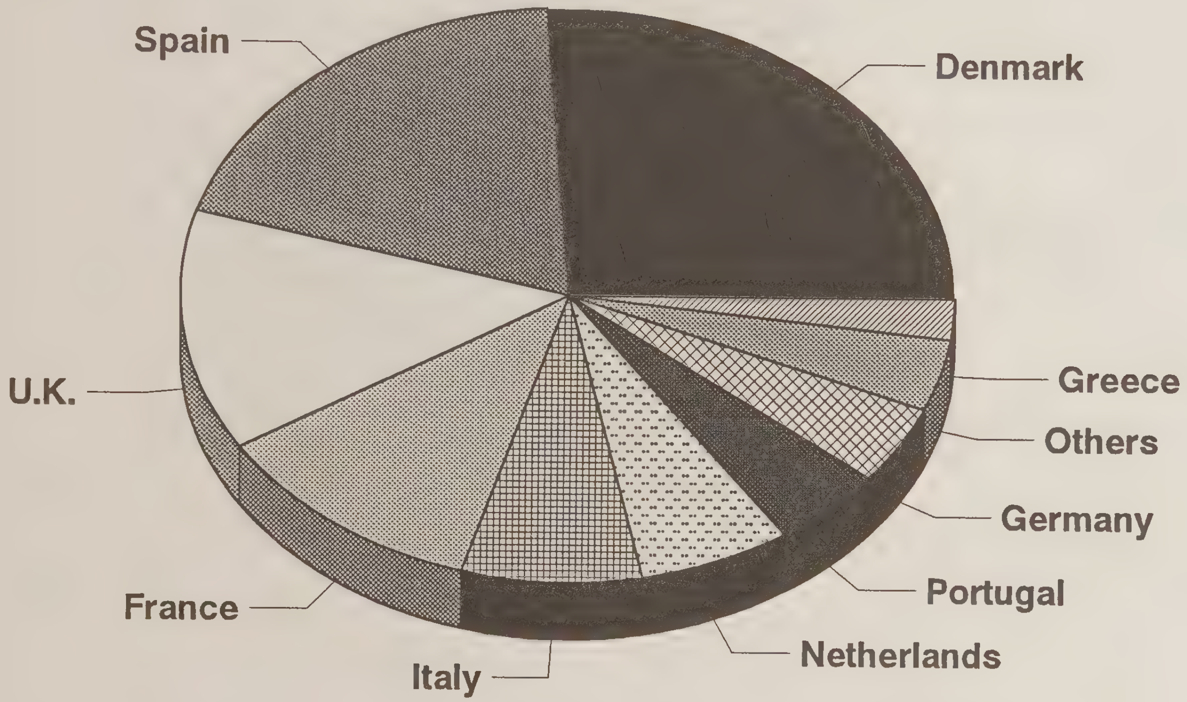


Fig. 10.--Non-EC high-seas fishing fleet, by country, 1992

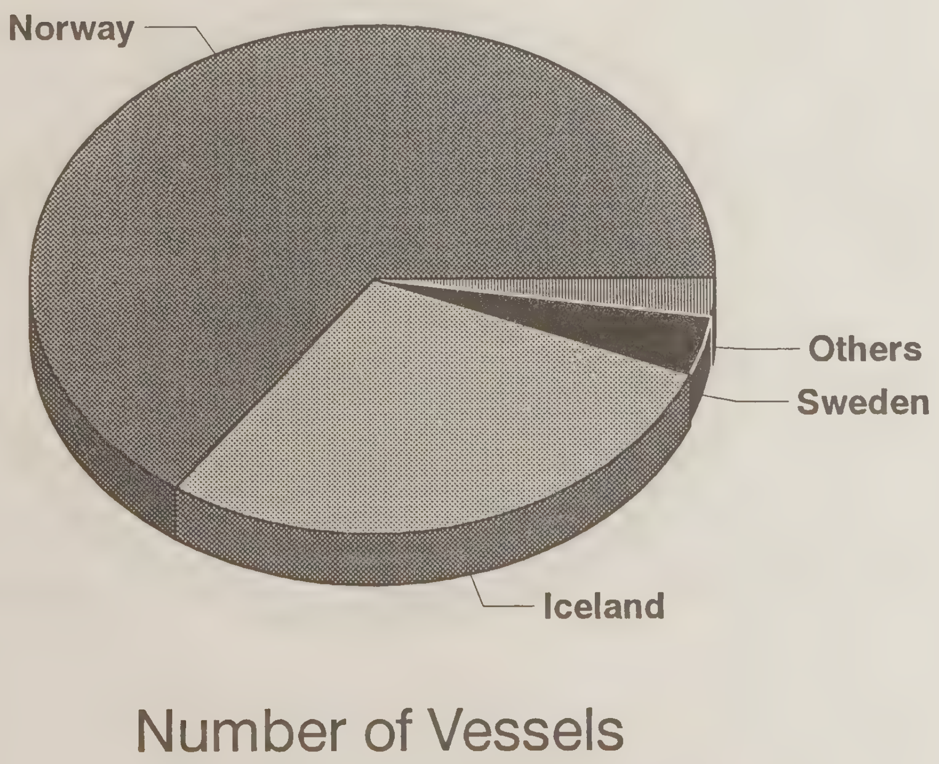


Fig. 11.--Non-EC fisheries catch, by country, 1992

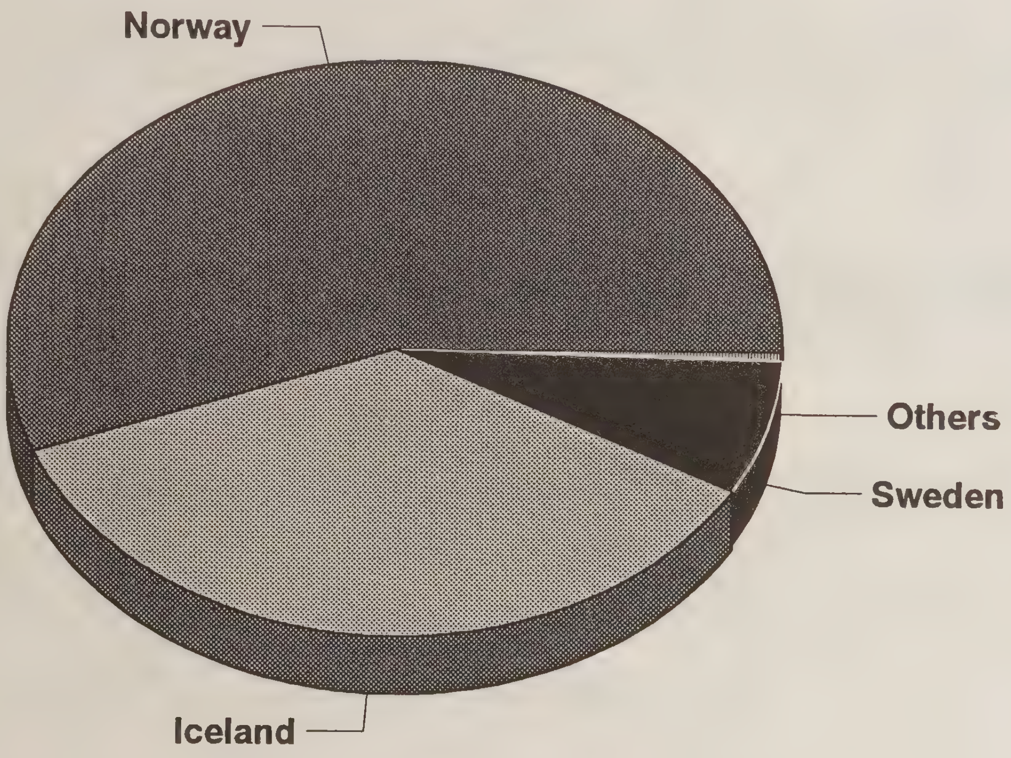


Fig. 12.--WESTERN EUROPE. High-seas fleet.

Distant-water catch, by major fishing grounds, 1991.

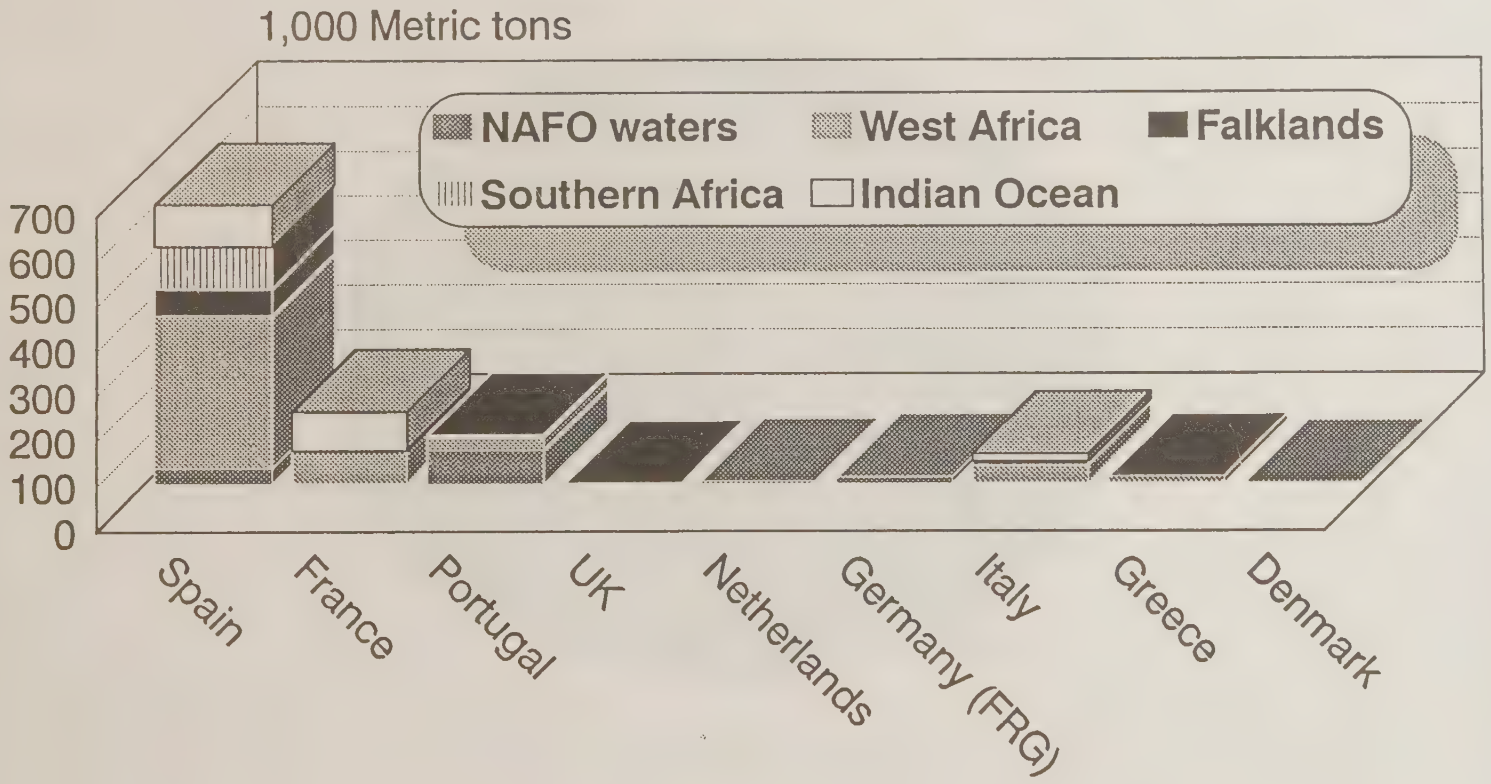


Fig. 13.--WESTERN EUROPE. Distant-water catch, 1991

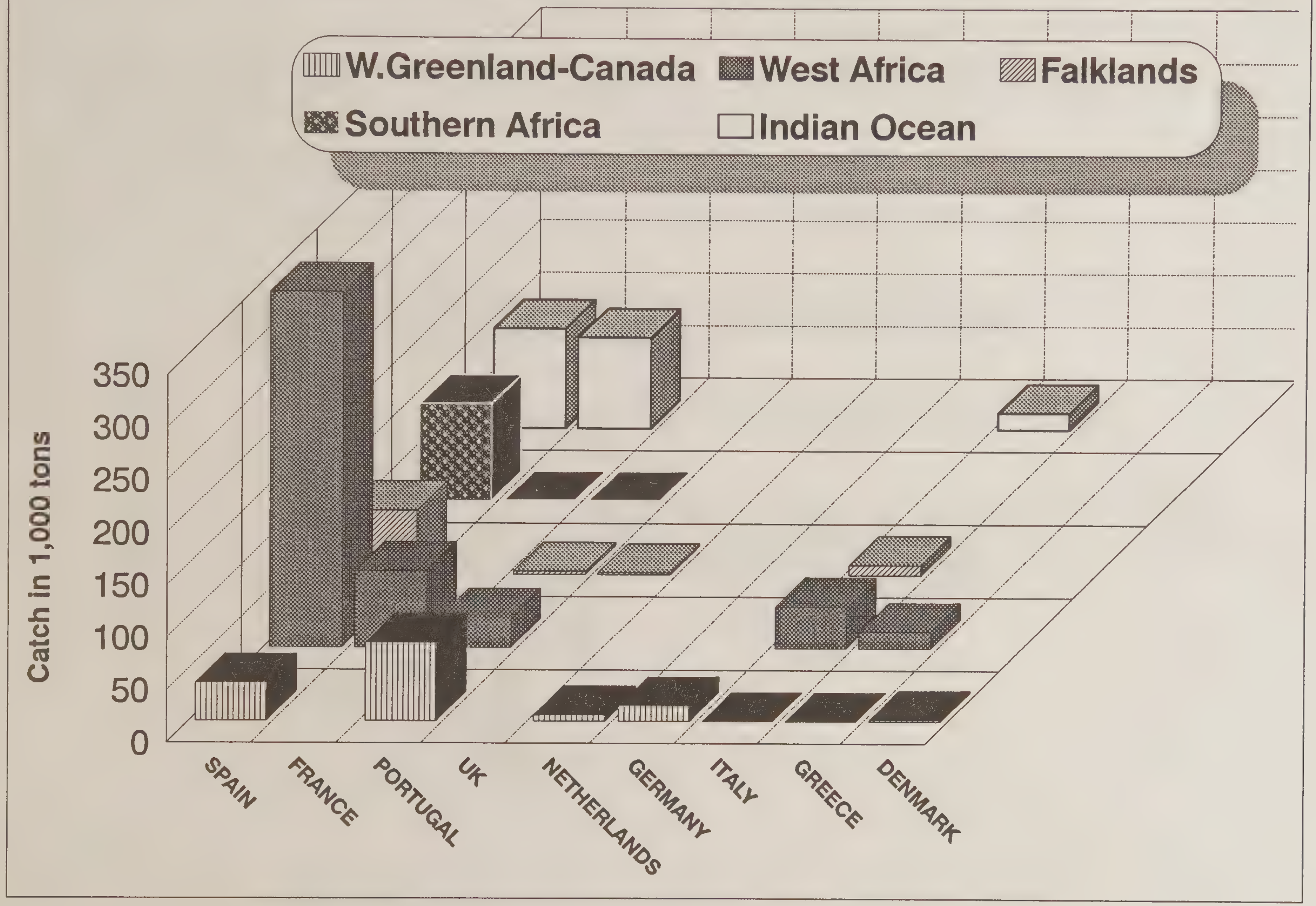


Fig. 14.--WESTERN EUROPE. High-seas fleet, 1991

Fleet and catch versus potential for high-seas fishing.

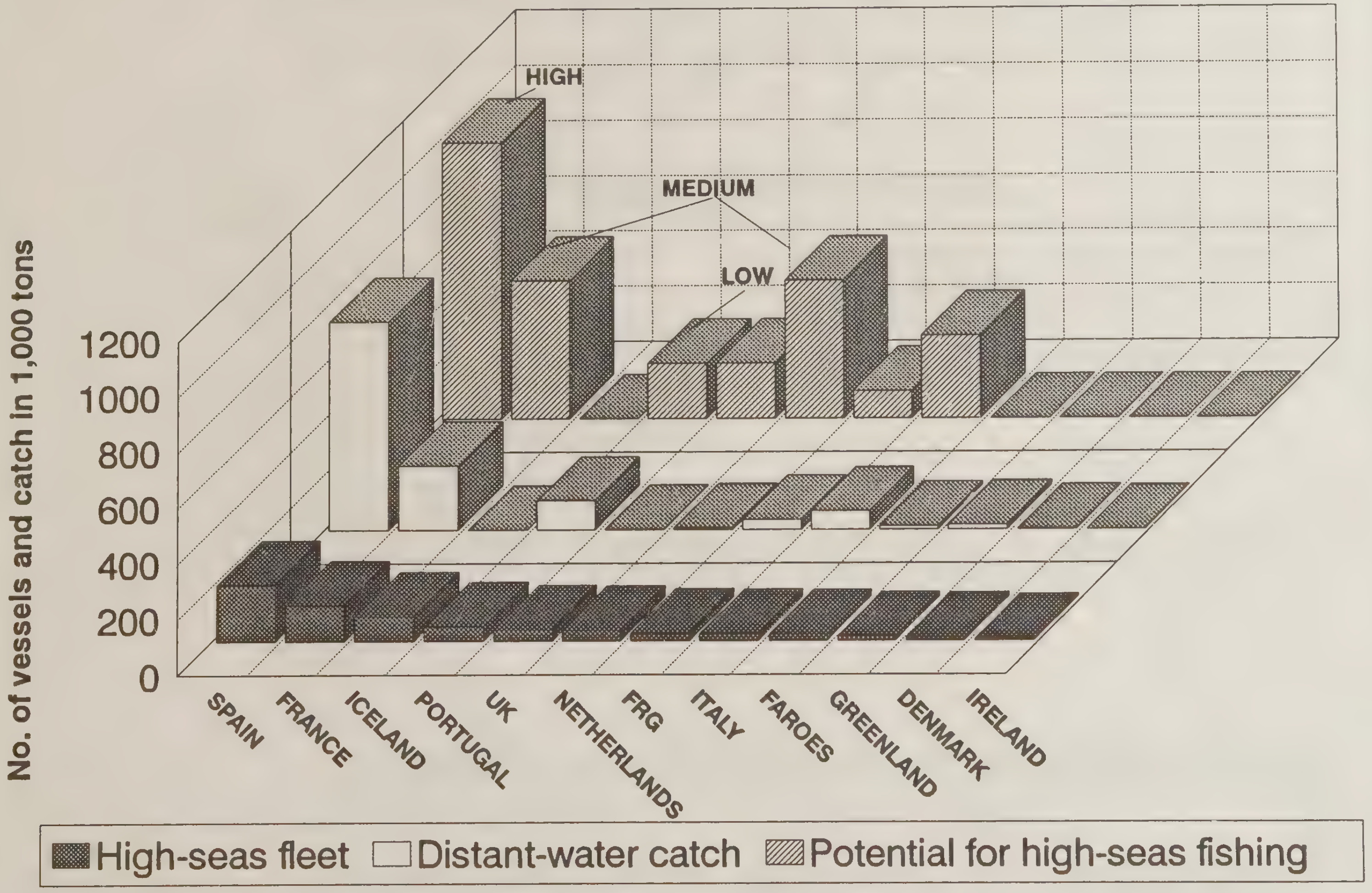


Fig. 15.--WESTERN EUROPE. Projected distant-water catch, 1994

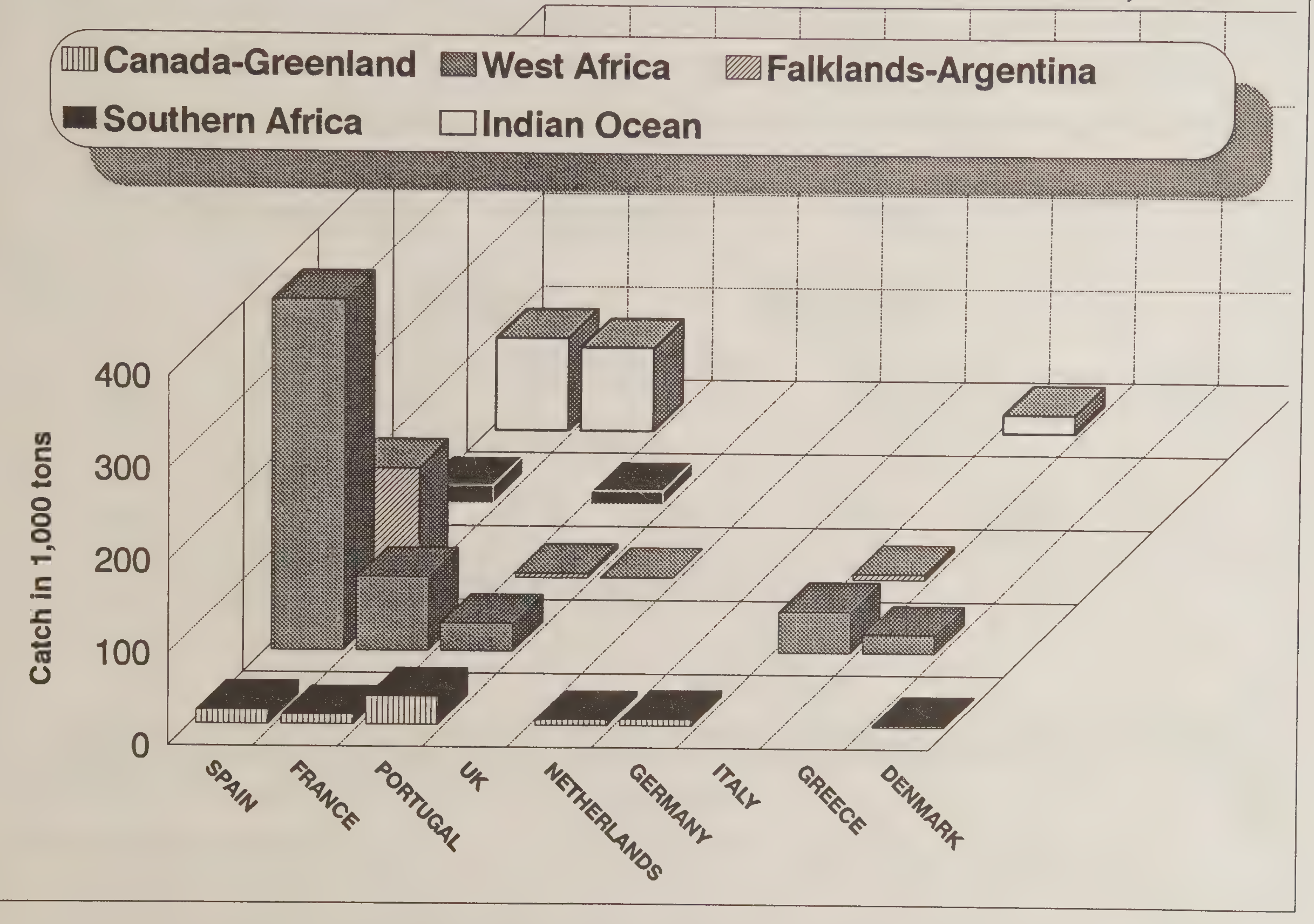


Fig. 16.--WESTERN EUROPE. Projected distant-water catch, 1995

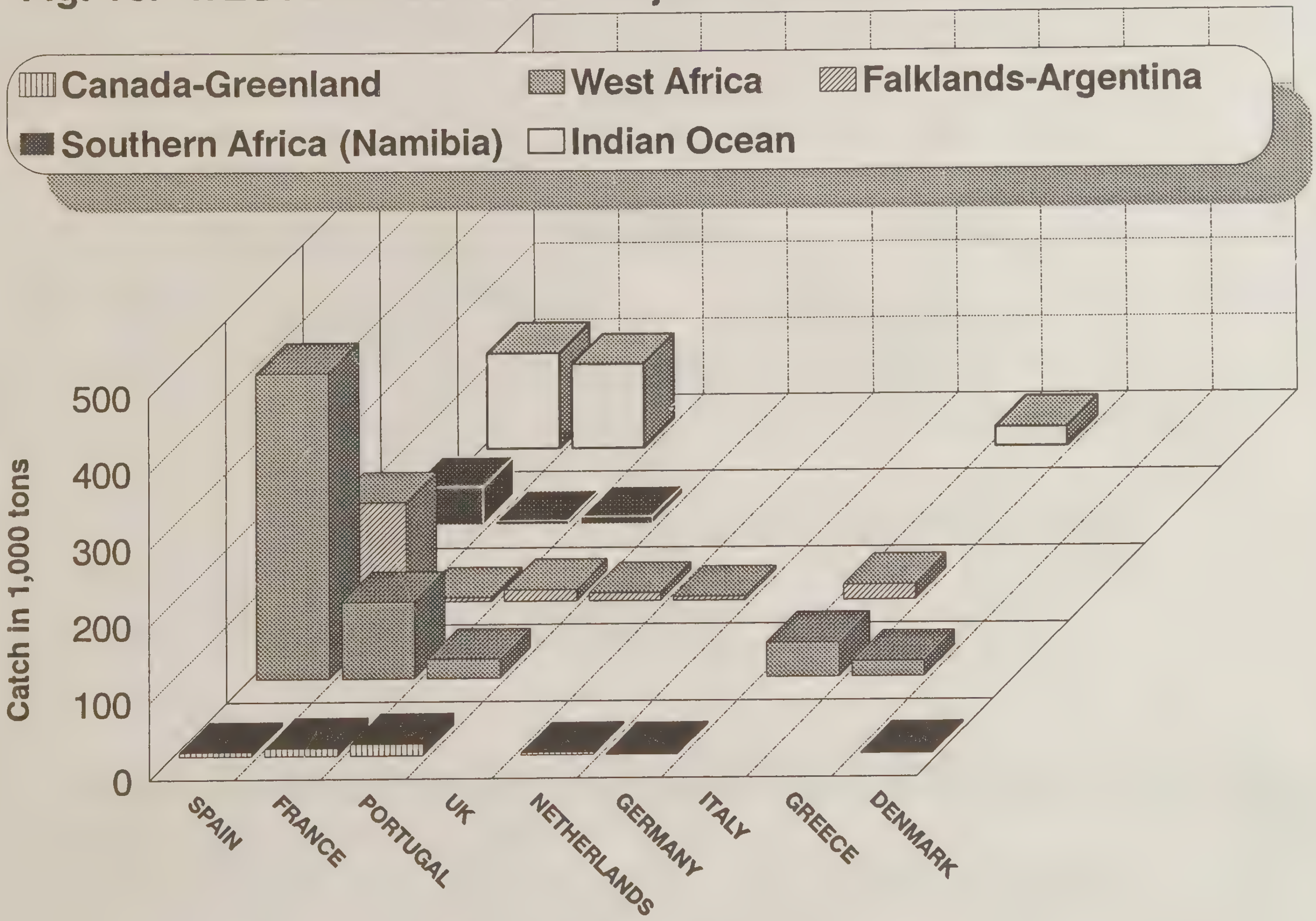
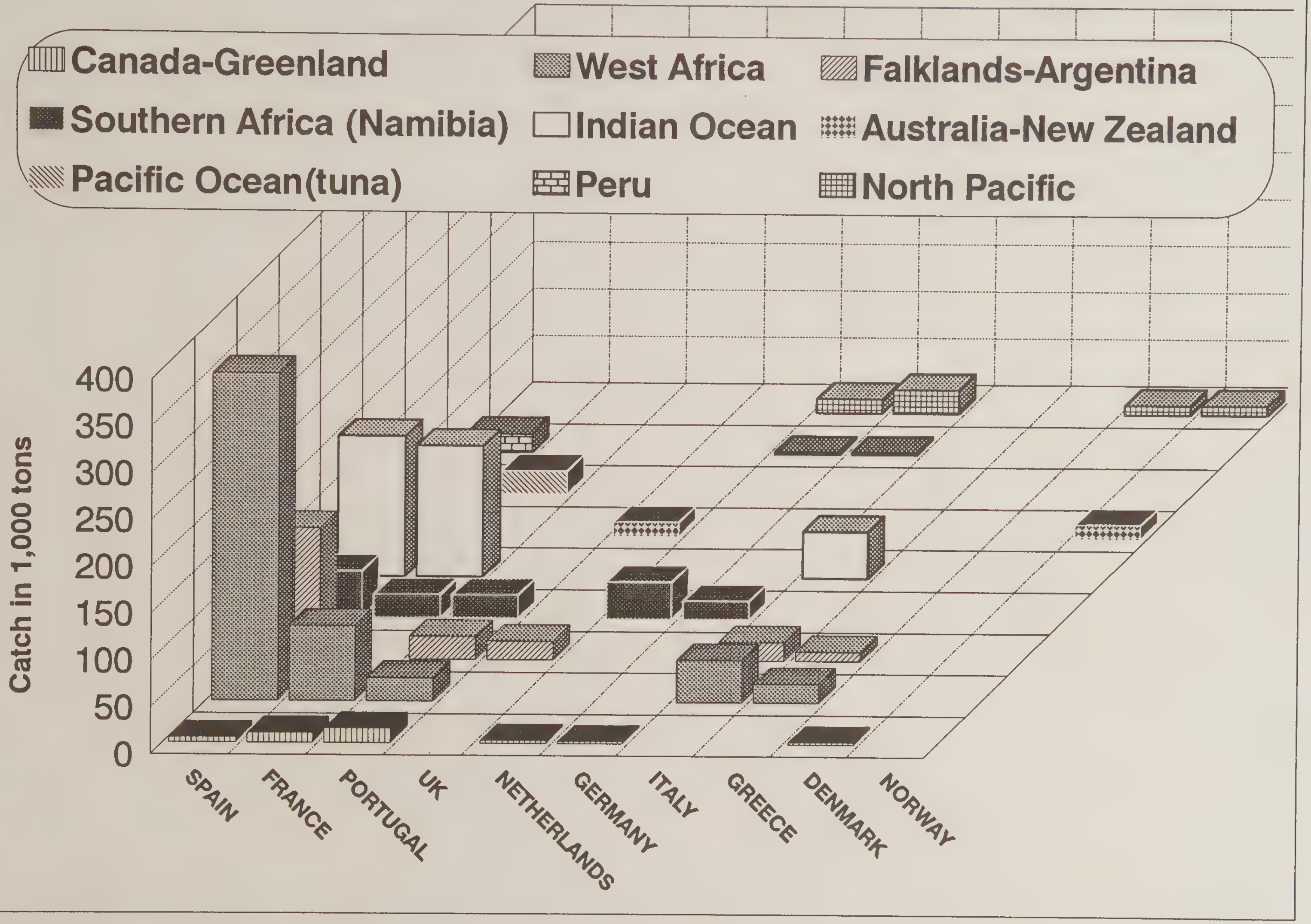


Fig. 17.--WESTERN EUROPE. Projected distant-water catch, 1996



APPENDIX SECTION

PART III. PHOTOGRAPHS

Photograph 1.--The 5,845-GRT German-flag vessel *Jan Maria* built in 1988, represents the latest in high-seas fishing capability. The vessel can fish, process, and transport fish anywhere in the world.

Photograph 2.--The German-flag vessel *Dirk Dirk* is another massive high-seas pelagic fishing vessel able to operate anywhere in the world, as a "klondiker" (buying fish from others) or as a fishing vessel in it's own right.

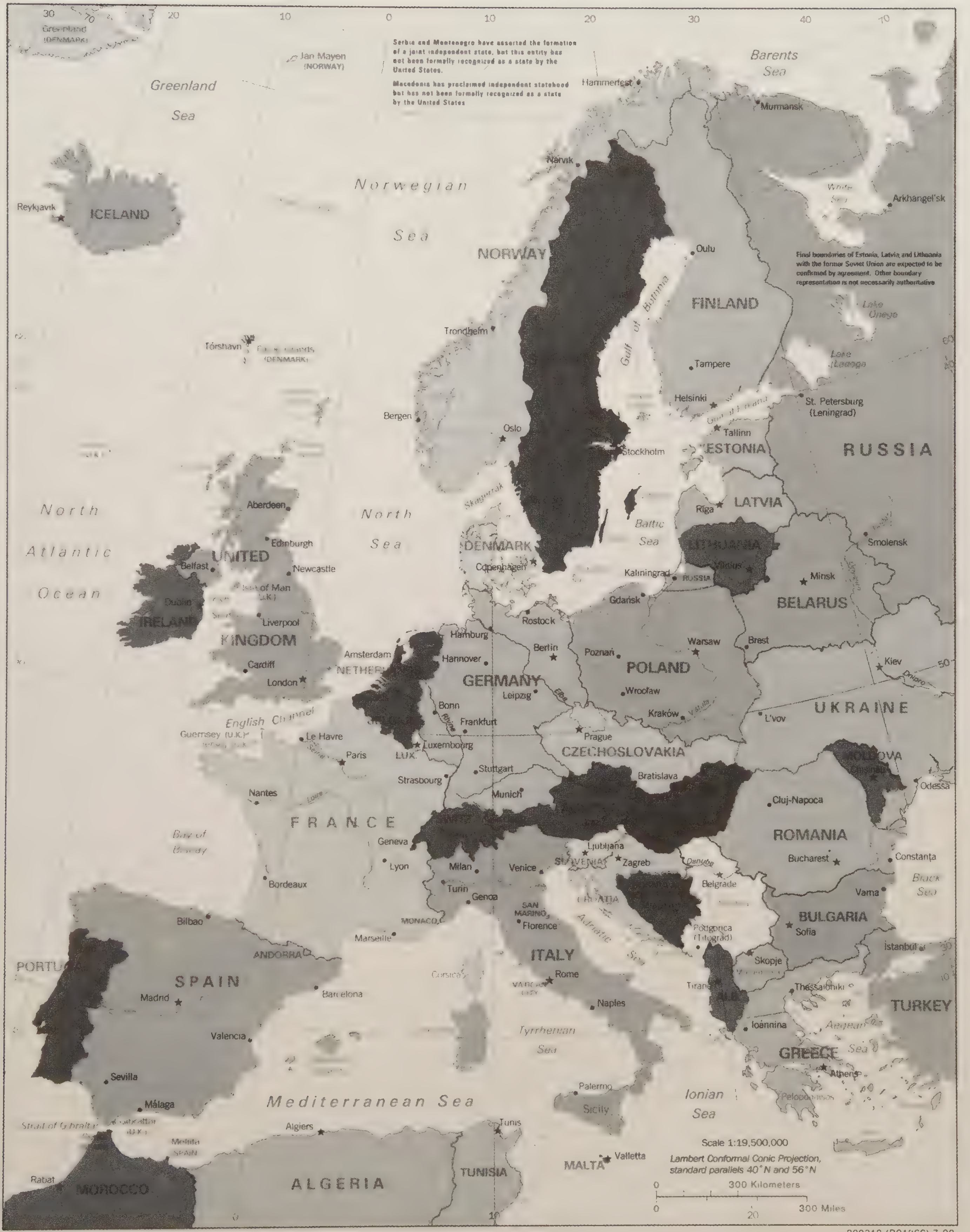
Photograph 3.--The *Nuevo Alcocero*, a 2,859-GRT Spanish trawler may fish in Namibia or Argentina in the future.

Photograph 4.-- The *De Giosa T* is a 1,245-GRT trawler built for the Italian fishing fleet in 1970.

APPENDIX SECTION

PART IV. MAP

Europe


Greenland (DENMARK)
Jan Mayen (NORWAY)
Greenland Sea
Norwegian Sea
Barents Sea
Hammerfest
Murmansk
Narvik
White Sea
Arkhangel'sk
Reykjavík
ICELAND
NORWAY
Oulu
FINLAND
Gulf of Bothnia
Lake Onega
Lake Ladoga
Trondheim
Tórshavn
Faroe Islands (DENMARK)
Tampere
Helsinki
Gulf of Finland
St. Petersburg (Leningrad)
Bergen
Oslo
Tallinn
Stockholm
ESTONIA
RUSSIA
Skagerrak
Riga
LATVIA
North Atlantic Ocean
North Sea
Aberdeen
Baltic Sea
Smolensk
DENMARK
LITHUANIA
Edinburgh
UNITED KINGDOM
Belfast
Newcastle
Copenhagen
Vilnius
Kaliningrad
RUSSIA
Minsk
Isle of Man (U.K.)
Dublin
IRELAND
Liverpool
Gdańsk
BELARUS
Rostock
Hamburg
Amsterdam
Berlin
Poznań
Warsaw
Brest
Hannover
NETHERLANDS
Cardiff
London
GERMANY
POLAND
Kiev
Dnipro
Leipzig
Wrocław
Bonn
Elbe
BELGIUM
Rhine
Frankfurt
Kraków
Vistula
L'vov
UKRAINE
English Channel
Guernsey (U.K.)
Le Havre
Prague
Paris
LUX.
Luxembourg
CZECHOSLOVAKIA
Seine
MOLDOVA
Chişinău
Stuttgart
Strasbourg
Bratislava
Odessa
Nantes
Munich
Loire
AUSTRIA
HUNGARY
Cluj-Napoca
FRANCE
SWITZ.
Bay of Biscay
Geneva
ROMANIA
Lyon
Milan
Venice
Ljubljana
SLOVENIA
Zagreb
Danube
Belgrade
Bucharest
Constanţa
Black Sea
Bordeaux
Turin
Genoa
CROATIA
BOSNIA AND HERZEGOVINA
SERBIA
Varna
SAN MARINO
Florence
Adriatic Sea
MONTENEGRO
Podgorica (Titograd)
BULGARIA
Sofia
Bilbao
MONACO
Marseille
İstanbul
ANDORRA
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TURKEY
Madrid
Barcelona
Sardinia
Naples
Ioánnina
Aegean Sea
Valencia
Tyrrhenian Sea
GREECE
Athens
Sevilla
Palermo
Peloponnisos
Málaga
Mediterranean Sea
Ionian Sea
Sicily
Strait of Gibraltar
Gibraltar (U.K.)
Melilla (SPAIN)
Algiers
Tunis
Rabat
MOROCCO
ALGERIA
TUNISIA
MALTA
Valletta
Crete
0
10
20
30
40
50
60
70

Serbia and Montenegro have asserted the formation of a joint independent state, but this entity has not been formally recognized as a state by the United States.

Macedonia has proclaimed independent statehood but has not been formally recognized as a state by the United States

Final boundaries of Estonia, Latvia and Lithuania with the former Soviet Union are expected to be confirmed by agreement. Other boundary representation is not necessarily authoritative

Scale 1:19,500,000

Lambert Conformal Conic Projection, standard parallels 40° N and 56° N

0 300 Kilometers

0 300 Miles

802012 (B01266) 7-92

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